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Thus it will be seen that if man has passions which impel him to the destruction of man, if he be the only animal who, despising his natural means of attack and defence, has devised new means of destruction, he is also the only animal who has the desire, or the power to relieve the sufferings of his fellow citizens, and in whom the co-existence of reason and benevolence attests a moral as well as an intellectual superiority.—*Graves' Clinical Medicine.*

JULY, 1868.

A Case of Long Retention of the Ligatures after Amputation of the Leg.

By J. R. Weist, M. D., Richmond, Ind.

When the ligatures, placed upon arteries after an operation, are retained long after the usual period of their separation, the surgeon, as well as the patient, is subjected to much annoyance, as "Doctors" are always found, who are ready in such cases to insinuate that the misfortune is the result of carelessness or ignorance on the part of the surgeon. If such cases were generally reported, a mass of facts could be accumulated that would do much to lessen this annoyance, for were the truth ascertained, I believe that it would be found that cases of this kind are much more common than they are usually supposed to be; and were this fact established, medical men would be more chary about charging such a result to the fault of the operator, and would, therefore, allow the patient and his friends to remain undisturbed by a suspicion that the delay in the case was chargeable to such fault.

Believing here that every report of a case of this kind must have a certain value, I briefly report the following:

Mrs. N——, æt. 50, while in good health, was thrown from a wagon November 15, 1867. Her left leg was caught in one of the wheels, and

so injured as to require amputation, at the junction of the upper and middle third, the same evening. The leg was amputated by the usual double flap method. The anterior and posterior tibial, and the interosseous arteries, only required the ligature. These vessels were carefully separated from the other tissues, and tied with rather fine, waxed silk thread. The ligatures were drawn tight. The flaps were approximated by means of silver sutures and isinglass plaster. About one-half of the wound united by first intention. The case progressed favorably, except that more pain was complained of during the first few days than is usual. After the tenth day gentle traction was made daily on the ligatures. At the end of the third week the wound was entirely healed, except along the track of the ligatures. These continued to hold until the *seventieth* day, when the one placed on the anterior tibial, and the one on the interosseous, were thrown off, that on the posterior tibial continued to hold, although as much traction was made on it each day as the patient would allow.

At about the end of the sixth month it was suggested that it would be well to attach a piece of elastic band to the end of the ligature, and so confine the other end of the elastic band to the stump as to allow it to exert constant traction on the ligature. This was carried into practice, but the appliance being badly arranged, it was not long tolerated by the patient, as much swelling and pain was produced; these unfavorable symptoms being mainly produced by the pressure of the ligature on the edge of the wound. This plan failing, I directed a splint made of sole leather to be moulded to the anterior portion of the limb, allowing the lower end to project some four inches beyond the face of the stump. The splint being confined to the limb by a suitable bandage, to the projecting extremity was attached a short piece of elastic band, the other end of the band being fastened to the ligature in such a way that constant and pretty strong traction was exerted on it in a direction parallel with its track in the wound. This, as it made no pressure on the skin or sides of the wound, was borne by the patient with but little complaint, and was successful, for at the end of a week, after its application, the ligature was detached to the great joy of the patient, after having remained in the wound *seven months.*

Rapid recovery followed.

Without speculating as to the reason for this long retention of the ligature, I will only call attention to the means employed for its removal. I have every reason to believe that it would have remained undetached for a much longer period, had not some plan of this kind been put in prac-

tice. The use of the elastic band in the manner and for the purpose stated is, so far as I know, new. Yet, I think it will be found of great value in similar cases, knowing, as we do, the influence exerted over absorption of the tissues by constant pressure, the modus operandi of the elastic band in a case of this kind, will be at once understood.

Granulations of the Conjunctiva (Trachoma). By PROF. SEELY.

In the following article I have by no means pretended to give a complete translation of the article as it appears in the original, but have given the substance of it, hoping to put it in a more readable form for the general reader. I have already expressed myself as to the value of the book from which this article is taken, (Wecker.)

Granulations of the conjunctiva (Trachoma) is one of the most delicate subjects in ophthalmology; a subject long agitated by numerous discussions, which, so far from rendering it clear, have rather obscured it. There have been two principal points of disagreement of authors upon the subject of granulations of the conjunctiva:

1st. Not having always closely separated the study of granulations from that of the complications.

2d. The anatomo-pathological investigation of these products having almost always been made at a too advanced stage of their development, so that attaining a correct idea of their progressive development was impossible. Granulations have been almost always and still are, confounded with an hypertrophic state of the papillæ. In purulent and diphtheritic conjunctivitis there are produced a swelling and considerable elevation of the papillæ. A microscopical examination of these enlarged and inflamed papillæ shows a layer of epithelium of greater or less thickness, whose deepest cellules are cylindrical and contain an oval nucleus resting in the midst of a granular mass. Under this epithelial layer is found an intercellular mass, more or less granular, beneath which, and surrounding it, are a number of vessels, which ramify and form quite a thick network toward the base of the papilla, presenting layers of fibre cellules mingled with many nuclei and cellules of new formation. The great number of nuclei and new cellules here met with have led to the supposition that there is a hyper-plasia of the cellular tissue of the papilla. The swelling is not due alone to a serous exudation, but probably to an increase of the elements of the cellular tissue itself which surrounds the

vessels of the papillæ. At the same time that the cellules of the conjunctival tissues increase, the intercellular mass increases in proportion. There is only an alteration of a pre-existing element of the conjunctival tissue, with a hyper-plasia of the cellular tissue that forms it. There is not in this case a neoplasm.

These changes are especially met with in purulent conjunctivitis; also in diphtheritic after the elimination of the fibrinous infiltration. Such a state must not be confounded with true granulations; for if we have to do with a simple enlargement of the papillæ we can make a favorable prognosis, that it will be possible to return the mucous membrane to a healthy state in a comparatively short period, one to three months. The prognosis will be quite the contrary if we have to do with veritable granulations. Here it will not be possible to bring the mucous membrane back to its normal condition except after an excessively long treatment, and we can but rarely prevent the production of a number of cicatrices, which are the result of true granulations.

The question now presents: What is true granulation?

If a case is selected where the granulations are beginning with an inflammation of the mucous membrane, they will be found under the form of small whitish spots closely set upon the vascularized conjunctiva of the tarsus of the upper lid. Each small white spot increases little by little in extent, and at the same time becomes raised a little above the level of the mucous membrane. At this period it becomes transparent and its whitish color degenerates into a gray. At the same time that one meets with the development of these spots and elevations upon the palpebral conjunctiva, they are seen appearing on the conjunctiva of the cul de sac, and may, if the disease increases, become developed in the bulbous conjunctiva, and even on the cornea. A microscopic examination shows them to be composed of a mass of nuclei so closely packed against each other that it is almost impossible to distinguish an intercellular substance. An examination at a later period of development shows that the intercellular substance has become very much increased. The granulation itself is formed of a semi-transparent grumous mass which does not present distinct cellular elements. Noting these changes it will readily be seen why in examining a conjunctiva long affected with granulations it will not be possible to see what this morbid affection, that has become developed, was in the beginning. Here are one or two theories to explain this formation of groups with nuclei in the conjunctival tissue. One theory is that in granulations there is a plastic exudation in which cellular tissue of new formation, not attaining to perfect development, is produced;

this last becomes organized, forming a very dense fibrous tissue, which in contracting destroys the tissue in which it took its rise.

Another theory of the development of granulations, and the one generally accepted, differs from the foregoing in this: that the production of the nuclei of the granulation is the result of a repullulation of the nuclei of the cellules of the cellular tissue.

Virchow has shown that the elements which compose the tubercle are not due to an organized inflammatory exudation, but to a neoplasm composed of cellules resulting from a repullulation of the cellules of the cellular tissue in which the neoplasm is developed. Granulation is thought to have the same origin; not an organized exudation, but a neoplasm due to a repullulation and division of the nuclei of the cellules of the cellular tissue which composes the conjunctiva. The round form which the granulation takes is not to be attributed to the disorganization of an element of the same configuration pre-existing in the mucous membrane. The tubercle always of itself assumes the spherical form. To pursue the analogy, we still see another striking character common to the tubercle and granulation. The tubercle, composed in the beginning of cellules and nuclei, is not slow in taking on a fatty degeneration, which commences in the center, soon attacks the whole neoplasm, and it becomes changed into a mass of fatty detritus. The granulation goes through a similar process. The crowd of nuclei which composes it diminishes and gives place to a semi-transparent and grumous mass, containing a small quantity of fat. Little by little the entire granulation becomes composed of nothing but this gelatinous mass, resulting from a decomposition of the nuclei. As the tubercle causes the destruction of the organ in which it takes its rise, or at the expense of the cellules of which it is formed, so the granulation often subjects the tissue in which it rises to the same fate. There exist, however, marked differences between the two neoplasms. The tubercle, after having destroyed a part of the tissue in which it was developed, and after becoming reduced to a fatty mass, acts somehow as a foreign body, provokes suppuration, ulcers, and becomes eliminated in this manner, by a double destruction of the tissue which it occupied. This is not the case with granulations. The gelatinous mass has not a tendency to cause a suppuration of the surrounding tissues. It more frequently disappears insensibly, and becomes transformed into a dense fibrillous tissue, analagous to a cellular tissue of new formation with a very marked tendency to contraction. This tissue contracting more and more tends to destroy the rest of the conjunctival tissue, obliterating the blood vessels. There is an appearance of the conjunctiva which is also confounded with granu

lations, having received the name of vesicular granulations. What is meant by that name is really an enlargement of some small vesicles found chiefly in the conjunctiva of the cul de sac, and especially toward the angles of the eye. They are nothing but isolated lymphatic glands. It is thought that these follicles may sometimes be changed into granulations, so it is necessary to combat this state actively.

Granulations may be divided into acute and chronic, or acute trachoma and chronic trachoma. Acute granulations represent the mode of appearance of this neoplastic tissue, in which their development takes place with a more or less intense inflammation of the conjunctiva. The chronic mode is the more usual form, however, for the development of granulations. The granulations develop slowly, without causing inflammatory signs on the part of the conjunctiva, and it is not till after quite a considerable production has taken place that a more or less intense inflammation attacks the conjunctiva and changes the appearance of the disease.

ACUTE GRANULATIONS.

This disease begins with a very marked injection of the conjunctiva and subconjunctival tissue. The swelling of the mucous membrane is not in proportion with the injection of the vessels and does not generally produce an elevation of the bulbous conjunctiva under the form of a chemosis. The limbus of the cornea from the beginning of the disease is swollen and vascular. A vascular net work girds the globe, forming meshes on it. We now often see the subconjunctival vessels injected, radiating toward the cornea. If we evert the upper lid we find a mass of small whitish spots separated from one another by the swollen papillæ. The elevation of the mucous membrane is little marked upon the tarsus, differing essentially from that we meet with in purulent ophthalmia. These small whitish spots are the true granulations. They may be overlooked by the attention being diverted by the enlarged papillæ. During the development of the granulations upon the lid small points of ulceration may take place upon the cornea. The swelling of the conjunctiva and papillæ may increase while the granulations disappear, and the secretion become more and more purulent, giving rise to a state corresponding with the purulent one of conjunctivitis. The well marked subconjunctival injection, the small whitish spots, and the scanty secretion allow us to distinguish this state from an intense acute catarrh, or a purulent conjunctivitis. Later on, when the swelling and vascularization have concealed these spots and the secretion has increased, it is difficult to tell what disease we have to deal with. This purulent stage may last three or four

weeks, when the injection of the bulbous conjunctiva may gradually fade away, and the small ulcers or abscesses on the cornea, if any have formed, heal, and the inflammation become fixed upon the palpebral conjunctiva.

The disease may terminate in two ways. First, the purulent state gradually subsiding, the granulations are absorbed and the normal state of the conjunctiva re-appears. Second, the inflammation may cease, but at the same time the granulations re-appear, when the acute stage passes into the chronic one, and we have chronic trachoma, a case in which the inflammation was not sufficient to cause an elimination of the new formation. Hence we see there is a state of inflammation and purulence of the mucous membrane which can, of itself, cause the granulations to retrograde. There are other cases where the granulations are increased more and more by an increase in the inflammation, being the reverse of the former and fortunately very rare.

PHYSIOLOGICAL SYMPTOMS.

Patients are generally troubled with some ciliary pains; their eyes water much, and are very sensitive to the light, especially if the cornea is affected. They experience a sensation as of a foreign body in the eye. The pains and weakness to the light render it impossible for the patient to work, from an inability to fix the eyes any length of time upon an object. The general state is not altered. We quite frequently meet with complications on the part of the cornea; either small ulcers on the limbus conjunctivæ, or a propagation of the disease upon the cornea itself. Granulations may be formed upon the bulbous conjunctiva, and later upon the cornea, giving rise to the production of pannus, the pannus in this case being a part of the disease, a true neoplasm.

ETIOLOGY.

This disease is most common among soldiers, in prisons, orphan asylums, etc. Vitiated air, especially that filled with animal exhalations, seems to favor the development of granulations. Granulations appear very often in an epidemic manner and are propagated very rapidly, especially among soldiers. Another mode of propagation is by inoculation. The secretion of acute granulations is inoculable, but it does not always produce the same disease; purulent or diphtheritic conjunctivitis may be developed. Granulations accompany other affections of the eye, as, for example, an irritation of the conjunctiva associated with affections of the cornea, chronic iritis, etc. They are also sometimes developed after a long use of atropine. It is not rare to see the eye, after having made use of this

remedy for some weeks in a case of iritis, tolerate it poorly, and if it is not discontinued granulations result. Such granulations, however, do not show such persistence as others, and disappear quite rapidly immediately the exciting cause is removed and the proper treatment resorted to. (It is seldom that the employment of atropine gives rise to true granulations. Ordinarily it produces only an hypertrophy of the papillæ.)

PROGNOSIS.

This is not generally serious, especially if the disease is recognized in the beginning. A recognition of it avoids bad treatment, as a want of such recognition might subject it to the treatment of acute, catarrhal, or purulent conjunctivitis, viz: the caustic. The cauterization would combat a salutary inflammation, an inflammation which is a most efficacious remedy. Also the too early application of the caustic may favor a diphtheritic complication, especially as many cases seem of themselves to take on this complication.

TREATMENT.

The point here particularly is to observe well the different causes and not do too much. It must always be borne in mind that granulations constitute a disease which, when the inflammation is severe compared with the neoplastic deposit, is cured without any therapeutic agent. Art comes in in two emergencies: First, when there is more inflammation than is needed to cure the granulations; second, when the inflammation subsides and the new formation increases so we are obliged to excite an irritation of the mucous membrane. The mere mention of these modes of treatment will suffice to show that it will often be fatal to apply the same treatment to different cases in an epidemic of acute granulations. The chief thing is to place the patient in the most favorable hygienic circumstances, and observe well whether the inflammatory state of the conjunctiva keeps pace with the deposit of granulations. If the inflammation does not pass the limits desired, and if the purulence of the conjunctiva does not become too pronounced, abstain from active treatment. Such patients should be separated from sound persons, especially in camps, orphan asylums, (or families where there are children, the latter should by no means be allowed to sleep together,) and kept quiet and the greatest possible repose given the eyes. Apply from time to time cold compresses to relieve the pains which sometimes trouble them. Protect the eyes from excess of light by blue or smoked glasses, and by those who are obliged to live by their occupation they should be worn all the

time. Act in a derivative manner on the bowels, and allow the patient all the fresh air possible.

If the disease takes on a purulent character and an abundant chemosis is formed, combat the excess of inflammation with nitrate of silver, (brushed on the everted lid and washed off with water; solution of strength of five or ten grains to an ounce of water,) and cold compresses. The application must not be so frequent as in purulent conjunctivitis, (which must frequently be made twice in twenty-four hours.) As we have already said, a certain amount of inflammation is necessary to absorb the neoplastic products deposited in the mucous membrane. Our procedure is entirely different as soon as we see the inflammation that attends the commencement of the granulations diminish. Our purpose then is to revive the inflammation, which is accomplished by cauterizations of the mucous membrane from time to time, with caustics, which do not produce solid eschars, but vascularization, through the irritation they produce. This end is attained by cauterization with sulphate of copper, repeated until quite a considerable development of the conjunctival papilla takes place, the grayish spots disappear, and a slight degree of purulence appears.

Affections of the cornea, as a rule, require no special treatment. If they supervene upon an excess in the purulence of the mucous membrane, this state must be combatted as in purulent conjunctivitis, by brushing the lids carefully with caustic, and neutralizing well the excess of caustic with chloride of sodium.

We can not end the treatment of acute granulations without remarking how often it would be well to abstain from an excess of therapeutic zeal, and to bear in mind that the inflammation which accompanies acute granulations has a greater curative power than any means art can apply.

(Chronic Granulations in the next number.)

Cerebro-Spinal Meningitis. By J. S. FARRIS, M. D. (An Essay read before the Johnson County Medical Society. Published by request of the Society.)

I propose offering a few thoughts upon the subject of cerebro-spinal meningitis, popularly known as spotted fever, purple fever, and purpuric fever. It is to be regretted that the nomenclature is so defective, and that we have not a more appropriate designation for this disease. Cere-

bro-spinal meningitis conveys the idea of a simple inflammation, and spotted fever that of a febrile condition, characterized by spots and discolorations of the skin, all of which are calculated to lead to a false idea as to the nature of the malady.

The presence of meningitis is not denied, but believed to be preceded by other morbid conditions, of which it is rather a result than the primary condition. The malady is of deep interest to us on account of its obscurity, gravity, and obstinacy in yielding to our art, and should therefore receive the most earnest attention.

The disease is not endemic in any country, but an occasional and transient visitor, imposing its unwelcome and destructive presence on various portions of the globe for a few months, and then disappearing for many years. Some of its visitations are wide-spread, sweeping over vast domains like a hurricane, causing human beings to fall like the forest before the blast; others dip down upon circumscribed localities like a tornado, sometimes almost depopulating towns, villages and neighborhoods, and sometimes alighting upon individuals here and there throughout the country. In this section of country, children and youths have been the principal sufferers, but in other localities, and in previous epidemics, all ages were more or less afflicted. The disease is not confined to the victims of crowded apartments, foul air, and insufficient and unwholesome food, like typhoid fever, but it spreads its wings of destruction over the mansion of wealth, the humble cottage, the hovel, and the prison. None can claim immunity from the fell destroyer on account of age, condition or circumstances in life.

A correct clinical history is difficult to give, on account of the varied forms and modes of attack the disease assumes, therefore I shall endeavor to picture the most prominent features, as they occurred in cases falling under my own observation. The attack is generally preceded by certain premonitory symptoms, such as loss of appetite, wandering pains, thirst, headache, weariness and general debility; but some attacks are ushered in without any observable premonition, the patient awakening from sleep and finding himself very ill. After more or less indisposition, there is generally a distinct rigor, of various degrees of intensity in different cases, with extreme prostration of the whole system. Reaction is generally slow and feeble, requiring a day or more for its completion. The nervous system is prominently affected; some cases marked by high excitement and preternatural acuteness of sensibility, others by stupor and a blunted state of the nerves of general sensation. In the former class of cases, the mind is anxious, apprehensive and desponding; the

pulse is rapid and feeble; respiration is hurried, irregular and sighing; the muscular system is in a tremulous condition, and variously affected in different parts of the body; the posterior cervical and dorsal muscles in painful tetanic spasm, drawing the head forcibly back; the respiratory muscles irregularly convulsed; the extremities in painful spasm, with subsultus tendinum. There is severe pain in the head, and aching in the back and extremities. Cutaneous hyperæsthesia and general soreness are so intense that the patient winces at the slightest motion, touch, or weight of the bedclothes; sharp, lancinating pain darts through various parts of the body, frequently eliciting screams. There are some cases of extreme prostration, with but little tendency to reaction. The patient complains of a vague, indescribable sensation, vertigo, ringing in the ears, dimness of vision, and tendency to syncope. The pulse is feeble and thready; the countenance pale and anxious; the surface cold and clammy; respiration sighing and convulsed; incessant thirst, nausea, and vomiting of a dark green fluid; the eyelids stand half open, pupils fixed and dilated, and the eyeballs constantly rolling. At first there are extreme restlessness and mental anxiety, and the body is affected with a general tremor; but the mind soon becomes clouded with delirium, and the patient sinks into a general stupor; the fingers and toes become clenched, convulsions ensue, then coma, and death. But sometimes there are attempts at reaction, and the struggle continues three or four days before the fatal scene.

When reaction is complete, and fever sets in, there is a marked aggravation of the symptoms. The pulse increases in frequency and tone, and the surface becomes hot and dry; the pain in the head, cutaneous hyperæsthesia, general soreness, and thirst increase in intensity; the face is flushed, and of a dusky or livid hue; the mind and body are in a state of extreme agitation, and the countenance is expressive of great agony. At this time, if not sooner, there is more or less delirium, sometimes wild and maniacal, at others low and muttering, with general stupor and tendency to coma. From the first to the fourth day the skin generally becomes discolored with petechiæ and vibices, quite prominent in some cases, obscure in others, and sometimes only to be seen on blistered surfaces, but very seldom entirely absent. The bowels are generally constipated, urine scanty, sometimes pale and limpid, at others high colored, and sometimes mixed with blood. After cooling, it presents a clouded appearance, with but little, if any, sediment deposited in the chamber. Sometimes there are complete suppression of urine and uræmia, at others retention from spasm or paralysis.

Sometimes there is a deviation from the ordinary mode of attack. In one instance the disease was ushered in with severe pain and tenderness of the abdomen, tympanites, vomiting, and purging of a greenish fluid. In another, it commenced with pain in a lower extremity, inflammation of the knee joint, and general febrile excitement, which continued two days before the ordinary phenomena were developed; and in the case of a girl, aged eleven years, it presented the phenomena of hysteria, but the subsequent development of pain in the head, fever, petechiæ, opisthotonos, and the fatal termination, proved the incorrectness of the diagnosis.

It assumes quite a variety of forms in its manifestations. The most prominent feature, in one case, was a powerless condition of the whole system. The pulse was fifty per minute, respiration slow and feeble, surface cool, and petechiæ well marked. The patient complained of a dull pain in the head, vertigo, double vision, and general formication. On the twentieth day she became insensible to all impressions, but when food or medicine was put into the mouth, it was swallowed. The bowels moved regularly, but the bladder had to be emptied with the catheter daily, till the twenty-seventh day, when she expired. Some cases are marked most prominently with pain, of a neuralgic character, darting through various parts of the body, though occasionally confined to a limb, joint, or some region. Some attacks are marked throughout by a perverted state of both general and special sensibility; in some, intolererance of light and sound, and general hyperæsthesia, with more or less delirium, resembling intoxication. In some cases, fever is the most prominent feature, being first developed, and continuing after other phenomena have subsided.

This disease assumes rather an inflammatory type in some cases, a typhoid form in others; but in the great majority of cases an irregular paroxysmal tendency, playing between the extremes of excitement and depression. It assumes this form in some attacks from the beginning, but most generally about the third or fourth day. The febrile excitement subsides, the system sinks into prostration, and, as it rallies from this, the nervous and vascular systems are thrown into the most violent and tumultuous action; pain in the head, hyperæsthesia and general soreness are augmented, respiration is hurried, face flushed, with extreme mental anxiety or delirium, and sometimes convulsions; but this soon exhausts the vital powers of the system, and it sinks into a corresponding state of depression. This is alarming in some cases, the pulse being almost imperceptible at the wrist, the surface cold and clammy, and

respiration feeble and sighing. The patient falls into a sleep, which partially restores the lost energies of the system, but this only causes another exacerbation. Sometimes death ensues from one of these paroxysms, as happened to one of my patients. There may be several of them in twenty-four hours.

After the disease has continued some ten or fifteen days, there is, generally, a marked amelioration of all the symptoms, as though it were the beginning of convalescence, but this only collects the elements of disease around the various centers, to burst forth again, in a day or two, with all its former violence. This apparent amendment, and subsequent relapse, have been known to occur several times in the course of the same attack —being so complete, in some instances, that the patient is able to sit up or walk across the room. Hypostatic congestion, and inflammation of the lungs and abdominal organs are likely to occur late in the disease, giving rise to serious, if not fatal complications. The duration and termination are very uncertain. Death may ensue at any time, from the first day to the end of the third month, the result depending upon the intensity of the attack and the constitution of the patient. The disease may be of such violence as to bring the vital functions to a stand, and death ensue in ten or twelve hours; or reaction may be partial, and the struggle continue three or four days before the fatal scene; or reaction may be complete, fever high, and the inflammation so acute as to destroy life in a few days; or it may do some irreparable injury, which eventually leads to a fatal end; or the disease may assume a typhoid or paroxysmal form, and continue until the patient dies from exhaustion.

The mortality is large. Of thirty-two cases, eleven proved fatal, five of which terminated within forty-eight hours, and the others, on the tenth, fifteenth, twenty-seventh, forty-second, and eighty-fourth days. The favorable cases are very protracted, convalescence beginning from the fifth to the eighth week, though the violence of the disease is spent much earlier than this, the patient remaining in a feeble state for some time before actual recovery begins.

The pathology is obscure, beyond a knowledge of the results of the inflammation. As to the effects of the disease upon the molecular changes and fluids of the body nothing positive is known. The serous covering of the brain and spinal cord is the main seat of inflammation. Beneath this tunic, at the seat of lesion, a yellowish or greenish lymph is found. The ventricles of the brain are sometimes filled with serum, or sero-purulent fluid, and the sub-arachnoid space sometimes contains various fluids, such as serum, lymph and pus. Sometimes there is merely

congestion with effusions; at others, very extensive inflammation of the meninges and nerve substance. Pus is found in some cases in various portions of the brain and spinal cord, and the cerebral and spinal nerves to be imbedded in a plastic lymph at their origin. The blood is in poor condition, its healthy, plastic property being lost. Some specimens will scarcely coagulate, and when it does it coagulates slowly, and forms a small, soft clot. The cupped shape and buffy coat are absent, and it presents a very dark, turbid, or mottled appearance, so far as I have observed. In three fatal cases, where the blood was subjected to a microscopic examination by Dr. P. W. Payne, it was found to contain no inconsiderable number of distinct granular corpuscles, less in size than the white corpuscles in health. "As in all other cases of blood poisoning, followed by rapid death, the blood in the heart and pulmonary vessels is dark and fluid." In some very malignant attacks the urine is mixed with blood and other substances foreign to that fluid, and said by those who have examined it to consist of albumen, serum, and broken down blood corpuscles. This is not a result of structural disease of the kidneys, but of a disorganized condition of the blood.

A very important and interesting question to the profession is, the *nature of the disease.* It is variously claimed to be essentially an inflammation, a modified form of typhus fever, and fever of zymotic origin. I am inclined to the latter opinion.

All inflammatory or symptomatic fevers are marked by a full, bounding, corded, hard or jerking pulse, and the fever is active and continued; in this malady the pulse is rapid and feeble, and the fever is of a low grade, irregular and paroxysmal in its course. The pulse is such as is found in debilitated states of system, impoverished blood and low fevers. Inflammation runs a certain course, and terminates nearly at a certain time, other things being equal. Cerebro-spinal meningitis has no regular course nor time of termination; death may take place in a day, or the disease may continue for months. The malignant attacks are too abrupt, and the milder ones are too protracted, to be classed as results of inflammation, since this can scarcely be of such violence as to destroy life in eight or ten hours from the first feelings of indisposition, and it terminates too soon for a favorable case of this disease. Meningitis, to destroy life in the shortest possible time, is necessarily attended with a flushed face, throbbing of the carotid and temporal arteries, and determination of blood to the head; but the most rapidly fatal attacks of this disease are marked by a feeble pulse, cold, clammy skin, and death ensues before reaction and fever are established. Delirium and coma, re-

sulting from meningitis, are constant; but in cerebro-spinal meningitis they are transient in most cases, being present one day, and absent the next. Post-mortem examinations, as yet, have failed to discover local lesion sufficient to account for the intensity of the symptoms and early death of the patient. The constitutional disturbance is generally in proportion to the extent of local mischief going on in the part in inflammatory fevers, but in this disease some of the most rapidly fatal attacks have revealed the least, while milder ones a much greater amount of local lesion.

The treatment forms an important diagnostic guide. Depression, consequent upon inflammation, readily yields, and the system rises in tone from depletion, while stimulation augments it. Depression in cerebro-spinal meningitis is diminished by stimulation, and augmented by depletion. Opium, which is so prejudicial and hazardous in cerebral inflammation, gives the most satisfactory results in this malady. The identity of cerebro-spinal meningitis and typhus fever is claimed by high authority, but this identity is not apparent. Typhus fever is marked by its regular and uniform development, course, decline, and time of terminating; by being contagious, and preying upon the victims of crowded apartments and starvation; by attacking persons of mature years, and the appearance of petechiæ on the seventh or eighth day; by having no particular local lesion, and forming a shield against a subsequent attack. Cerebro-spinal meningitis differs from it in the abruptness of the attack, irregular paroxysmal tendency, having no regular time of terminating, not being contagious, principally confined to children and youths, attacking all, in whatever condition or circumstance in life, prevailing in rural districts; petechia appearing on the first or second day, constant appearance of local lesion, and susceptibility of the patient being attacked by typhus fever immediately after recovering from this disease. Seeing, then, that it is not a simple inflammation, nor identical with typhus fever, and that it presents the phenomena of malaise, rigor, reaction and fever, in common with other fevers, we may safely infer that it belongs to that family of diseases, and that it is possessed of its own peculiarities.

All essential fevers are attended with more or less local lesion, and some of them manifest a preference for certain parts or organs. Intermittent fever enlarges the spleen, typhoid fever affects Peyer's glands, scarlatina and dipptheria alight upon the larynx, pharynx and other parts, and cerebro-spinal meningitis, by the same kind of preference, alights upon the cerebro-spinal meninges.

The cause of the disease is obscure. Prevailing only as an epidemic, and not related to any apparent cause, it doubtless originates from some

peculiar epidemic constitution of the atmosphere. The intimate relation to, and dependence of, the vital functions upon the surrounding aerial elements, and the powerful influence that the atmospheric forces are capable of manifesting upon the structures and functions of the body, and the absolute necessity of their perfect equilibrium in the system, leave no doubt that an altered state or disturbed equilibrium are fruitful sources of disease. That such disturbance of the relation of those forces to the vital functions is the cause of cerebro-spinal meningitis, there is good reason to believe. The season of the year seems to have some influence in developing the conditions necessary for its production, as it prevails generally in the months of February, March, April and May. The great prostration, stupor, delirium, and other nervous phenomena attending the disease, and the absence of vascular excitement and determinations to the head, clearly indicate a poison in the blood. That the greater part of the phenomena of the disease result from a poison in the blood is evident, from the fact that simple inflammation is not attended with the same amount of constitutional disturbance that is manifested in this malady.

The source of the poison, whether it is taken into the blood from the atmosphere by the absorbents, or formed in the system as a result of morbid action, is an interesting question. The external origin does not accord with the laws of any of the known atmospheric contaminations. It is neither an animal or a vegetable miasm, for the disease prevails extensively—when and where all of the conditions necessary for their production are entirely wanting. It is not a contagion, or the disease would be propagated from one to another. It is not a transportable germ, like that of cholera, or the malady would prevail mostly along the great commercial thoroughfares of the world. But there is good reason for believing that the poison results from morbid action in the system, and that the morbid action results from a disturbance of an equilibrium of some of the aerial forces, which is essential to health and life. It is known how powerfully a disturbance of the equilibrium of the electric force impresses the molecular structures, and how readily they enter into decomposition when life is destroyed by it. How easily, then, can such a disturbance suspend the function of assimilation, and excite a rapid retrogade metamorphosis of the tissues, resolving them into carbonaceous and nitrogenous compounds, beyond the power of elimination? That such is the case in cerebro-spinal meningitis is not a mere presumption, but corroborated by facts. Could elimination keep pace with the retrograde action, nothing would result but rapid emaciation; but in case of

a failure on the part of the eliminating organs to remove these products, as fast as they are formed, not only emaciation but a poisoned state of the blood results. The great prostration, stupor, intoxication, delirium, coma, livid hue of the skin, petechiæ, dark color of the blood, sense of suffocation, and the strong ammoniacal odor arising from the patient, in all probability result from carbonic acid and nitrogenous compounds circulating in the blood. The amount of stupor, delirium and coma depend in a great measure upon the functional activity of the eliminating organs, so far as my observation extends. When there is profuse elimination, they are not so manifest as when it is suspended. I have witnessed cases attended with profuse vomiting, purging and sweating, which were free from all such disturbance, but after their cessation for a time, stupor and delirium would ensue. I have witnessed cases of profound stupor which cleared away upon the supervention of diuresis and diaphoresis. These facts leave but little doubt that the poison results from retrograde action and faulty elimination.

Suppression of the renal function for a length of time excites nervous phenomena, similar to those of cerebro-spinal meningitis; and, moreover, post-mortem examinations reveal similar local lesions, which in all probability result, in both cases, from the products of the retrograde metamorphosis of the tissues, circulating in the blood. The extreme sense of suffocation and want of breath, hurried breathing, livid hue of the skin, and dark color of the blood, denote a highly carbonized state of the blood, and the stupor intoxication, delirium, and the strong ammoniacal odor the products of the renal secretion in that fluid.

The treatment of the disease has been varied to suit the entertained notions of the pathology. With a view of combating acute meningitis, active depleting means have been freely employed, and it has been treated on exactly the opposite plan; but the result of both plans have been far from satisfactory. There is no known plan of medication that promises much in the cure of the disease, but much good can be done in the way of palliation. The first object is to establish reaction. When this is required, friction, and hot stimulating applications to the surface, and warm, diffusible stimulants internally, are to be relied upon. After this is established, the bowels are to be cleared with some gentle cathartic, and afterward kept in a soluble state by small doses of hydrarg. cum creta, blue pill, rhubarb, or some other gentle laxative. The kidneys, which are at fault, are to be addressed with suitable diuretics, which are to be varied to suit the indications of each individual case. The importance of this function can not be overrated, as the comfort and

life of the patient greatly depend upon its activity. The bladder is to be carefully examined, and see that the urine is secreted in proper quantity, and voided. Sometimes, from spasm of the sphincter or paralysis of the detruser urinæ muscles, the urine is retained in the bladder, or dribbles away. Warm applications to the hypogastrium sometimes give relief, but oftener than otherwise the catheter has to be used. The skin should be kept sponged, and well rubbed with a coarse towel, to divert the circulation to the surface and promote free elimination. The temperature of the apartment is to be regulated, and the room well ventilated, that the patient can breathe a good supply of oxygen, and the general system sustained with tonics and good diets, with a view of enriching the blood. Pain and other nervous distress are to be allayed with opium, combined with ipecac and camphor, unless contra indicated. I have used this combination freely, and apparently with the best results. It allays pain, quiets nervous excitement, prevents spasm, stimulates the nervous centers, gives tone to the pulse, and promotes diaphoresis. It does not produce its usual narcotic effects, but seems to drive away the stupor of the disease. It has proved to be one of our very best remedies in controling morbid action. Quinine is of great value, when there is a periodic tendency, and as a general tonic.

The circulation requires constant attention, in order to combat the various irregularities attending it. Depression is to be met with gentle stimulants, high excitement by gentle sedatives, and irregular determinations by counter irritation. Blisters are not to be used, unless clearly indicated by some well marked local trouble, and then with great caution, lest they destroy the vitality of the part and induce gangrene. Sinapisms to the extremities and along the spine will accomplish all that can be done by blisters, and there is no danger attending their use.

The patient requires constant attention, on account of the sudden changes and paroxysmal tendency of the disease. During the exacerbation, he should have fresh air, cool drinks, and should be sponged with cool or cold water; and the subsequent depression is to be combatted with warm applications and diffusible stimulants, care being taken not to carry sedation so far as to augment the depression, or stimulation to increase the succeeding exacerbation. In those very malignant attacks where reaction fails to be established, our only hope is in the use of hot applications to the body, mustard draughts to the extremities, sponging with the tincture of capsicum or other excitants, and the free internal use of diffusible stimulants. Too often our best directed efforts fail.

The propriety of blood letting in any case is, at least, very doubtful. I have thought that there was no blood to spare, and that it required replenishing, rather than diminishing in quantity. Much of the excitement and irregular determination depends upon the impoverished state of this fluid, in the same way that violent paroxysms and determinations to the brain result from profuse hemorrhage. The paroxysms are alike in both cases, to all appearance, and doubtless depend upon nervous erethism, from want of the requisite stimulus, and hence the impropriety of any further depletion.

Having thus, in a brief manner, passed over some of the main features of the disease, as they appeared in my own practice, and stated the convictions of my own mind as to the nature, cause and treatment of the disease, I submit them for your consideration.

Dr. Breckinridge's Objections to Dr. Salisbury's Theory of the Cause of Intermittents and Remittents.

Since the issue of the last number of our JOURNAL, a friend has called our attention to an admirable criticism of Dr. Salisbury's views as to the cause of *intermittent* and *remittent fevers*, published in the *Richmond Medical Journal*, May, 1867, by Dr. S. P. Breckinridge, of Danville, Kentucky. Although a year has elapsed since the original publication of Dr. Breckinridge's article, yet thinking that it may have escaped the eyes of most of our readers, as it certainly had our own, and believing that the criticisms he has presented are just and scientific and not readily controverted, we select from it the following *objections* to Dr. Salisbury's theory. T. P.

1st. Dr Salisbury declares,* "so far as I have examined, (and my observations have been widely extended,) I never have found a case of ague, in situ, where I did not find these plants," (three species of palmellæ, or palmelloid plants, one green, another red, a third lead colored,) "growing near; and vice versa, I never have found these plants growing in any locality but that, if such locality was inhabited, intermittent or remittent fever, or both, prevailed in proportion to their extent and profusion."

Now the first part of this sentence is quite credible, for the place of growth of the Algæ is extremely various.† Whenever moisture of any kind lies long exposed to the air, Algæ of one group or other are found

*American Journal Medical Sciences, January, 1866, page 63.

†Wm. H. Harvey on Marine Algæ. Smithsonian Report, 1855.

in it. Moisture and air are the only requisites to the development of this class of cellular plants. Different species may be found at all temperatures. Some flourish in the tropics, others in the temperate zone, and still others, like the red snow plant, (which is of the family Palmellaceæ and is analagous in form and color to the "Gemiasma rubrum" of Dr. Salisbury, "which produces intermittents of a congestive type,") find an appropriate soil on snow-capped mountains, or on the surface of polar ice. The very air which we breathe is supposed by some authorities to be the natural home of that form of vegetable life now under consideration. "It has even been supposed," says Mr. Wm. H. Harvey, of the Dublin University, from whom we have just been quoting, "that the minute Diatomaceæ, whose bodies float through the higher regions of the atmosphere and fall as an impalpable dust on the rigging of ships far out at sea, have been actually developed in the air; fed on the moisture semi-condensed in clouds, and carried about with these 'lonely' wanderers. When this atmospheric dust was first noticed, naturalists conjectured that the fragments of minute Algæ, of which the microscope showed it to be composed, had been carried up by ascending currents of air, either from the surface of pools, or from the dried bottoms of what had been shallow lakes. But a different origin has recently been attributed to this precipitate of the atmosphere by Dr. F. Cohn, Professor Ehrenberg, and others, who now regard it as an evidence of the existence of organic life in the air itself. This opinion is founded on the alleged fact, that atmospheric dust, collected in all latitudes, from the equator to the circum-polar regions, consists of remains of the same species, and that certain characteristic forms are always found in it, and are rarely seen in any other place. Hence it is inferred that the dust has a common origin, and its universal diffusion round the earth points to the air itself as the proper abode of this singular fauna and flora—for minute animals would seem to accompany and, doubtless, to feed upon the vegetable atoms. If Algæ thus people the finely divided vapor that floats above our heads, we shall be prepared to find them in all water condensed on the earth. The species found on damp ground are numerous. These are usually of the families Palmellaceæ and Nostachaceæ."

One of the plainest conclusions to be drawn from these remarks is that palmelloid plants, being spread generally over the earth, will frequently enough be found in districts where intermittent fevers prevail, just as confervæ are often found under like circumstances; but while naturalists acknowledge the value of the latter plants, as respects their influence upon the atmosphere, they have heretofore never discovered deleterious effects accompanying the growth of those first mentioned. The mere fact of the existence of malarial disease in the vicinity of this form of cryptogamic vegetation, no matter how often it may occur, is no evidence of the relationship between them of cause and effect. But, on the other hand, instances may be pointed out of the prevalence of periodic fevers at places where the most scientific explorers could detect in the air neither vegetable spores nor any solid particles whatever. * "Frequently," says Dr. Joseph Leidy, "I have examined the rains and dews of localities in

* Introduction to Flora and Fauna within Living Animals.

which intermittents were epidemic upon the Schuylkill and Susquehanna rivers, but without being able to detect animalculæ, spores, or even any solid particles whatever. I have examined the air itself for such bodies, by passing a current through clear water. This was done by means of a bottle with two tubes passing through a cork stopper; one tube dipping into the water, the other reaching not quite to its surface. By sucking upon the latter tube, a current of air passed through the former, and was deprived in its course of any solid particles. Ordinarily, when the atmosphere was still, early in the morning, or in the evening, neither spores nor animalcules could be detected. When piles of decaying sticks or dry leaves were stirred up, or the dust was blown about by the wind, a host of most incongruous objects could be obtained from the air; none, however, which could be supposed capable of producing disease." Dr. Leidy has since stated that he has had palmellæ and many other species of Algæ growing in his chamber without experiencing any symptoms of periodic fever. It may be said that all this is negative evidence. We reply, that is true; but if it is established, in even one case, that the febrile attacks sustained by the patient were not caused by vegetable spores, it has become manifest that these spores are not the *exclusive* cause of this disease.

2d. There are numerous instances of regions rich in cryptogamic growth—possessing the varieties of Algæ in the most luxuriant profusion, and yet apparently exempt from the ague poison. Such are portions of Hindostan, some islands in the Indian ocean, the bayous of Louisiana, and the Dismal Swamp in Virginia.*

On the other hand, the arid, rocky Island of Malta, where no vegetable growth is said to exist, is especially obnoxious to the periodic fevers.

When the English army, in 1794, was decimated by malarial disease in Walcheren, it was encamped on soil consisting "of a fine white sand and about a third part clay," which supported no vegetation but stunted heath plants.†

3d. The statement of Dr. Salisbury, to the effect that quinia checks the multiplication of yeast plants in fermentation, seems to be incorrect. We made the test first with sulphatis quiniæ grs. v, and yeast ʒ i, and wheat flour enough to show plainly the process of fermentation, if it should occur. On examination, sixteen hours afterward, fermentation was seen to have proceeded just as if the quinia had not been present. The same amount of yeast (ʒ i) and flour (one teaspoonful) was tried with sulphatis quiniæ, grs. x, with a like result. Then twenty grains of the salt were used, and finally *half a drachm* of the same to the above mentioned quantites of the other substances—but still fermentation went on as usual. The dough "rose" to the customary hight and, after being baked, presented the appearance of a very respectable breakfast roll. It tasted extremely bitter—that was all. On microscopic examination, the risen quinine dough presented appearances identical with those of the risen unmedicated dough, with the exception of the presence of quinine crystals.

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* Dr. S. H. Dickson on the Causation of Diseases. Richmond Medical Journal, Jan., 1867.

† Sir Gilbert Blane, quoted by Dr. Thomas Watson.

Thus the analogy sought to be established between the action of quinine in controlling the development of the "malarial cryptogams," and its action "in checking the number of yeast plants in fermentation," can not exist, except where it would be useless to science to find it—in the author's imagination.

4th. A paroxysm of intermittent fever can not be regarded as an effort to eliminate poison from the system, because its prevention, or arrest, benefits the patient. The latter *fact* is too obvious for comment.

5th. The arrest of a paroxysm by the mere application of ligatures to the limbs of the patient,* points to the nervous system as the actual seat of the disease. According to Brown-Séquard, than whom there is no higher authority, the malarial poison produces fever by a peculiar influence upon the spinal cord, and the success of the ligatures against fever and ague is due to a favorable change in a nervous center, induced by a peripheric irritation of incident nerves.

6th. In many cases of intermittent fever *there is no sweating stage*, but simply a chill and a fever. Consequently the poison is not eliminated according to the theory under consideration—yet the patient may speedily get well.

7th. On the other hand, the health of the patient fails in proportion to the frequency and copiousness of the morbid diaphoresis which accompanies a paroxysm.

Secondary Syphilis Communicated to a Wet Nurse. By HENRY LEE, F. R. C. S., Surgeon to St. George's Hospital.

A patient and his wife lately came under my care. The man had had syphilis six years ago. He was then under the care of two hospital surgeons of acknowledged reputation. In six weeks he had a slight eruption on the skin; and six months afterward he suffered from sore throat. He took no mercury for the primary affection, but rubbed in some mercurial ointment for six or seven weeks for the secondary disease. There were no subsequent symptoms, and the patient, considering himself well, married four years ago. Three or four weeks after the first impregnation the wife had some spots on her hands; she subsequently lost her hair, and had inflammation of one eyelid. She miscarried with her first child after a fall. She became pregnant again fifteen months after her marriage, and had a dead child at the end of seven months. She then had a living child, which was apparently healthy. It however had an eruption on its skin at the expiration of a month, and died when eleven weeks old. A fourth child was born apparently healthy, and was given to a healthy young woman to nurse. Some spots appeared on the child's mouth when a fortnight old; and it subsequently had eruption in other parts of the body.

I saw the wet-nurse five months after she had commenced nursing the child. There was a circumscribed, oval, elevated, discoloured patch,

* Brown-Sequard. London Lancet, reprint. May, 1866.

covered with thick epithelial scales, an inch below and to the outer side of the left nipple. This was of much firmer consistence than the surrounding parts, but wanted the characteristic induration of primary syphilitic sores on other portions of the skin. A gland in the axilla was considerably enlarged, very hard, and accurately circumscribed. The remains of a well marked, copper colored eruption were distinctly visible on different parts of the skin, especially upon the arms. The spot on her breast had commenced, she said, soon after taking the child to nurse. Her own child, which was quite healthy, she had not nursed. She had never suffered from any enlargement of the glands in the groin, nor from any local symptom. Her husband, whom I saw, appeared a perfectly healthy man.

I do not bring this case forward as illustrating any point which is not now perfectly well known; but it affords a very clear and distinct instance of the way in which secondary syphilis may be communicated, and that to more than one individual. Until recently it was held to be impossible that such communication could take place. Judging from the writings of medical men twenty years ago, this seems to have been at that time the almost universally received doctrine. It is greatly to be feared that the boldness with which medical men were accustomed at that time to lay down the law that every primary syphilitic sore must necessarily have proceeded from one similar in kind, has in many instances been the cause of the gravest and the most unjust accusations. The reputation of many a wife has been thus assailed in its tenderest point; the character of nurses has been impaired; and I could cite at least one case, which came under my own personal observation, in which a young maiden was accused of immorality, when she had been infected by using the same spoons and cups as her fellow-servants. In all such cases a double injury is likely to be inflicted. The patient had not only to suffer from a protracted disease which she had no means of avoiding, but is liable to have her fair reputation dishonored into the bargain. It is to be feared that this injustice has often been fostered, if it has not been originated, by erroneous surgical pathology. If such a serious evil does lie at our door as medical men, it becomes us at once to make what amends we can, and it is with this view that I have ventured to bring this subject before the profession.

There are also one or two points of a scientific nature that may not be unworthy of attention.

1. The character of the induration of the primary affection, as it appears to me, is different on the breast, and perhaps on the cheek, from that which is more usually observed. The affected portion of skin is doughy and elastic, giving the sensation of india-rubber rather than of cartilage. This induration, in the cases which I have observed on the breast, is not accurately circumscribed, but rather it fades gradually into the consistence of the surrounding parts.

2. The original disease in the husband, in the case related, was treated without mercury; and the secondary affection appears to have been so treated during a very inadequate length of time. This patient may probably have discontinued attending his surgeons of his own accord, on account of his predilection for homœopathy; but, as the case stands, it is

not an encourageing one as regards the treatment of real constitutional syphilis by a *short* course of mercury; and still less does it tend to uphold the idea that this disease, in its origin, may safely be left to itself, as appears to be maintained by some who have lately written upon the natural history of syphilis.

Whether the lamentable results in this case are to be attributed to the want of treatment of the original affection; to the insufficient treatment of the secondary disease; to the patient having placed himself under a homœopathic practitioner before his surgeon dismissed him; or whether the similar results might have happened under any plan of treatment,—I shall not have time at present further to discuss; but I am, at all events, anxious that we should have a clear idea of the pathology of this disease. We may at least hope, if our medicines do no good (which, when properly administered, I am very far from admitting), that our theories shall do no harm; and to this point I would, in conclusion, for a moment revert. It almost always happens, when a fact supposed to be new is started, that it is shown within a few brief weeks or months to have been anticipated at some time or other, either in part or altogether. The theory of the communicability of secondary syphilis was held by many of the older writers, although they did not prove its correctness. The idea held possession of some of the best minds independent of any physical proof, as the atomic theory may have been received by many, independent of an chemical experiments. Our great English bard, who knew something of human physiology, although he never, so far as I know, made that his especial study, was quite at home on this subject. In "Measure for Measure," act I, scene 2, Lucio has a controversy with a gentleman, who twits him with being "piled." Lucio confesses a most painful feeling of his speech, but retorts that "whilst he lives he will forget to drink after him." The gentleman says he is sound, but Lucio replies: "Nay, not as one would say healthy; but so sound as things that are hollow: thy bones are hollow; impiety has made a feast of thee." Shakspeare here clearly alludes to constitutional syphilis, and implies that it may be communicated by a drinking cup, as in the case of the young woman to which I have referred. Could any doubt for a moment exist as to the nature of the disease to which he refers, it is removed by his allusion in the same passage to the "French crown," which in modern days, with more politeness to our neighbors, we render "corona veneris."

[*The Lancet.*

Saville-row, June, 1868.

On Medical Education. By JOHN HUGHES BENNETT, M. D., F. R. S. E., Professor of the Institutes of Medicine and of Clinical Medicine in the University of Edinburgh.

It is with no small surprise I have observed that the excellent papers on Medical Education, inserted in three of the April numbers of *The Lancet*, by Dr. Parkes, have led to so little discussion. No doubt it

requires long experience in teaching, a knowledge of the wants of students, and an intelligent appreciation of what has been recently accomplished in the various schools, not only of this but of other countries, before enlarged and correct views of so intricate a matter can be obtained. Even then differences will be found to prevail among those who have considered the subject, which require serious and candid discussion. Having, however, during the last twenty-five years looked at this question in its various aspects, and placed some of my observations on record,* I may perhaps be allowed to comment on some of the suggestions for which we are indebted to Dr. Parkes.

The idea he has put forth, that practical should precede systematic instruction, appears to me worthy of great attention. Whether a student would better understand any branch of science or art by first hearing a methodical and orderly exposition of its principles, with definitions of its terms, and afterward proceed to their practical application; or whether, having seen these last and studied details, he would be better prepared to follow the theories and generalisations which are derived from them, is a very difficult question to answer. It is one involving a consideration of the inductive and deductive methods of instruction, both of which have their advantages. Some subjects are probably best learned in the first way, and others in the second. For example, in chemistry, a young man could not usefully enter upon laboratory work, commence testing and still less analysing, unless he had previously made himself acquainted with the nature and property of elementary bodies, and with other information that only systematic teaching could give. On the other hand, practical physiology, which consists of actual demonstration and examination with the microscope of the ultimate structure of the tissues, of working out their chemical composition, and of observing their vital and physical properties as shown by experiment, would doubtless greatly facilitate any general consideration of the functions of the animal body. I agree with Dr. Parkes in thinking that the out-patient or dispensary system of practice should follow clinical instruction in an hospital. Here, probably, the best rule to follow would be: 1st, a course of clinical teaching; 2d, a systematic course; and 3d, out-door or dispensary practice. The discussion of such topics must do good; but I think it will be found that such is the variety in the student's modes of thought, as well as in the accidental circumstances that surround him, that prescribing any definite mode of procedure is neither applicable nor advisable.

Dr. Parkes has put forth another idea, as to clinical instruction, which demands comment—namely, that the staff of teachers should be much increased, and that young physicians and surgeons should give tutorial courses on special subjects to limited numbers of students. Now, the proper persons for such kind of work are the house-physicians and house-surgeons, who, in the Parisian hospitals, instruct most usefully in this way. But I have met with very few young men in Edinburgh capable of so teaching, for the simple reason that they seldom occupy their positions more than a year, a period sufficiently short to instruct themselves. I believe, however, that an improved system of clinical instruction, and

* The Lancet, May 12th, 1866.

giving such offices as incentives to students who distinguish themselves clinically, would correct this, especially if their positions were retained longer. Then such young men should be empowered to give limited practical courses, under the supervision of the professor, for which a small fee should be charged, say £1 1s; and such courses should be made imperative and preliminary to the more general study. Dr. Parkes has an idea that their labors would lessen the emoluments of the professors, and he thinks that, "as few men lecture for direct gain, perhaps no objection would be raised to this." I hope he will pardon me for thinking that in this he is much mistaken. Why should not teachers lecture for gain? Why should not excellence in communicating instruction be rewarded? One of the reasons that good professors do not abound is because the emoluments of their offices are so low. The art of teaching, once acquired, is so valuable that its possessor should be largely endowed, and every effort made to retain him in his office for the public benefit. I am aware that some persons are of opinion that any one can teach, as well as that any one can examine. Both, in my opinion, require long preparation, great care, and peculiar aptitude. Skill in their exercise is by no means common, so that, when found, they should be cherished accordingly. I hope, therefore, that the recent movement which has taken place among the London lecturers will lead to a diminution in their number, an increase in their emoluments, and a concentration of the schools. Those who obtain eminence as professors will, I trust, be induced to remain teachers, instead of abandoning their posts, as they now do, to reap the fruits of practice. We have thirty thousand British practitioners; how few really good instructors! Let us, then, endeavor to elevate the position of the professor, so as to render the office commensurate in dignity with its acknowledged importance, and worthy the ambition of the most distinguished men of the age.

Another idea, well deserving attention, put forth by Dr. Parkes, is that there should be authorised text books. This pre-supposes similarity in teaching. If the nature and mode of medical instruction shall, through the influence of the Medical Council, be approximated, as is much desired, I agree with him in thinking that such authorised works would be of incalculable benefit. Moreover, they would tend better than anything to equalise examinations throughout the country, a result no less to be wished for. Indeed, the marked differences in teaching and in examination which now prevail might be usefully remitted for consideration to a Council of Teachers. The Association of Lecturers in London should be extended to other cities, and a conference held for the purpose of considering and adjusting essential points. Among these I think should be put in the first category: 1. How should teachers in medicine be appointed? 2. Who should examine? 3. A clear understanding of what ought to be taught under each head or branch of instruction. 4. Determining how professorships in various schools, though differing in name, should teach in uniformity.*

In conclusion, I can uot too strongly commend the valuable suggestions of Dr. Parkes to the consideration of all those who may influence legis-

* See "Observations on Medical Education." Edinburgh: Black. 1867.

lation on the subject of medical education—a matter, the importance of which can scarcely be exaggerated, and on the happy settlement of which the future advance and welfare of our profession essentially depend.

[*The Lancet, June 12th.*

Edinburgh, June 5th, 1868.

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Lessons in Physical Diagnosis. By ALFRED L. LOOMIS, M. D., Professor of the Institutes and Practice of Medicine in the Medical Department of the University of New York; Physician to the Bellevue and Charity Hospitals, etc. Published by Robert M. DeWitt, No. 13 Frankfort street, New York.

Professor Loomis disavows, in his preface, any attempt at originality in this work, his sole object having been to collect in a plain and comprehensive compend the results of the research of many inquirers.

A somewhat careful perusal of this volume leads us to believe that it will be of very positive value to the student, and may be consulted by almost any practitioner, too, with advantage. Observation has convinced us that by far the smallest number of young medical graduates enter upon their professional duties even moderately expert in *physical diagnosis;* and the theoretical knowledge they have obtained will soon die, unless refreshed by frequent reading, and above all made to germinate in the field of actual experience. In the accomplishment of the former element of vitality to this knowledge, the book in question is a suitable one; it is a sort of *vade mecum* which the physician may make his companion in some of his morning rides, or in the weary hours of waiting upon a case of tedious labor. But here we want to quarrel somewhat with the *form* in which the publisher has seen fit to send the book forth—long, broad and slim, it is inconvenient for ready transportation; the same amount of printed matter might have been put in much less space, and in a more portable shape—making a volume that could be readily slipped into the pocket by the physician when called out. It is only by the husbanding of the odd minutes, the seizing upon all available time, that the physician in active practice can accomplish valuable ends, in

studying or in writing; and for the former, we want at many times a small volume that we can readily carry with us.

It is a great mistake made by some men—shall we call it a mere and lame excuse for their failure to contribute to the stock of professional knowledge?—that having a large practice is entirely inconsistent with reading and with writing. We might select from our contributors three of the most valued, and we know them to be very extensively engaged in professional business, and yet are most industrious students, and every year make important contributions to professional literature.

When John Mason Good could accomplish the entire translation of Lucretius, "*On the Nature of Things*," in the streets of that Babel of noise, and confusion, and hurrying multitudes, London, during some two years daily walks to visit his numerous patients, let no physician excuse himself to others, or to his own conscience, from being a student and a writer, by the incessant demands of practice. T. P.

The Indigestions; or, Diseases of the Digestive Organs Functionally Treated. By THOMAS KING CHAMBERS, Physician to H. R. H. the Prince of Wales, Consulting Physician and Lecturer on the Practice of Medicine to the St. Mary's Hospital, etc. Second American edition, from the second and revised London edition. Henry C. Lea Philadelphia. For sale by Robert Clarke & Co., Cincinnati.

The first edition of this work was favorably noticed at some length in our JOURNAL; it is, therefore, unnecessary to enter into a presentation of its topics, and a discussion of its merits now. "Chambers on the Indigestions" is a work of great practical value; it commends itself to every physician, and will bring him in useful knowledge, knowledge for daily application, vastly more than the cost of the volume. T. P.

Electro-Physiology and Therapeutics; being a study of the Electrical and other Physical Phenomena of the Muscular and other Symptoms, during Health and Disease, including the phenomena of the Electrical Fishes, By CHARLES E. MORGAN, A. B. M. D. New York, Wm. Wood & Co. 1868; pp. 714. Illustrated.

This book is a mine of knowledge to the student in the department of science to which it relates, but like mines of minerals it must be wrought with intelligence, skill and industry, or there will be no profitable result follow the labor. It is not a placer, into which one may dip with his pan at any point, and wash or winnow clear the pure gold of full value; but it is a well defined vein of rich ore running deep into the mountain,

widening continually as it penetrates the interior. And further, as successful mining for any particular mineral requires not only a general acquaintance with that branch of industry, but also a special knowledge of the substance sought for, so in this intellectual mine, in order to reap the highest reward for his labor, one must not only have a general fund of scientific knowledge, but must likewise be fully posted in the elementary facts and principles of electro-magnetism.

Dr. Morgan's book is, therefore, one rich in science, so elaborated, interwoven and involved, that to make it of practical usefulness to the general practitioner of medicine, some clever adept at such intellectual analysis must separate the conclusions from the intricate details, disrobe the style of its foreign peculiarities, and adding something of pathology, give it to us in this simplified form.

From the preface, we learn that the author died after his book was written, and before it went to press, and that it was issued under the supervision of Prof. W. A. Hammond, who says: "My own connection with the volume has not extended beyond a revisal of the proofs. The style is entirely the author's, for I have not felt myself warranted in changing any of the forms of expression which he had contracted through his long residence in Germany."

Twelve chapters, extending over nearly two hundred pages, are devoted to the general study of magnetism and electricity, such as was deemed a necessary preliminary to the consideration of electro-physiology; then follow thirty-two chapters, covering nearly four hundred pages, given to the elucidation of electro-physiology; and one chapter, of twenty-five pages, detailing the methods of electro-therapeutic application closes the book.

The text is illustrated by one hundred and seventy-one drawings and diagrams, thirteen of which, in connection with the final chapter, indicate the method, and quite plainly point out where electricity may be applied to particular parts for special results.

At this time a complete analysis of the book can not be given in these pages. We can only say that it is a most thorough and comprehensive treatise on the subject, written by an American who resided so long in Germany that he became imbued with German enthusiasm in science, with German patience of inquiry in the pursuit of knowledge, and with many forms of idiomatic German expression, not always the most lucid certainly, when clothed in English words.

Our readers will be interested to learn that by a carefully conducted series of delicate experiments Dr. Morgan has been enabled to give us

the rapidity with which muscles contract, the rate at which the nervous agent travels, and how much time it requires us to think. Not having seen any such estimates before, we confess to some surprise at the laggard style in which these vital actions are performed.

In the human system the nervous agent passes along the nerve trunks at the moderate pace of ninety-seven feet per second, and the wave of contraction travels along the muscle at only three feet per second, while to perfect the simplest thought requires .088 of a second. In relation to this last item, our author, after detailing the experiments establishing the result, says, with charming naiveté, "It thus appears that 'quick as thought' is, after all, not so very quick." The speed of the nervous agent, as compared to that of electricity, is about as *one* to nearly *eighteen millions;* to that of light as *one* to *eleven and a half millions;* and even to the transmission of sound in the atmosphere as 1 to about 11.3; all of which goes to establish that our nervous system is somewhat of the "slow coach" order.

We close this notice with an extract quoted from page 336, giving our author's estimate of the value of Schiff as an experimenter in science, and we do this in support of some incredulity that was expressed in this JOURNAL for December last, as to the justness of the importance that had been given to Schiff's experiments relating to the circulation in the liver. Dr. Morgan recites Schiff's and Valentin's experiments regarding the electric current in muscles during and after *rigor mortis*, and then says: "Apart from the circumstance that Schiff and Valentin *are notoriously inexact, though pompous investigators*, positive facts refute their conclusions." J. F. H.

Prison Hygiene. An Essay prepared at the request of the Prison Association of New York, for insertion in their Twenty-third Annual Report, and reprinted by their order. By JOHN H. GRISCOM, M. D., one of the Vice Presidents of the Association. Pp. 23; Albany, 1868.

Any one interested in the subject treated of in this *brochure*, can find in it important facts, practical ideas, and sound common sense, presented with the author's usual force and point. It was not written for the profession, but was intended for persons connected with prisons, and those interested in the general welfare of prisoners, and the style and language are adapted to such readers.

Dr. Griscom sets out with the declaration that "the *subjects* of prison discipline constitute a class of beings *sui generis*," and after commenting

on, and enforcing the truth of, this text, announces as a corollary that "*prison medicine* becomes a separate and distinct branch of science." Perhaps this language is too broad, but he certainly would have been within bounds if he had declared that for a general practitioner of medicine to take proper professional charge of a prison and its inmates, would demand a special study and preparation.

The necessity of suitable location of prisons in regard to salubrity is clearly pointed out and illustrated by examples; the diet of the prisoners, their employment, and the whole internal police of these penal institutions are duly considered. As an instance of want of due attention to these points, it is stated that "in the reports of the Ohio State prison most remarkable results of mismanagement are given. For example, during the five years from 1842 to 1846 inclusive, there were reported a yearly average of 752 cases of disease occurring in an average of only 498 prisoners, making the number of patients 50 per cent. greater than the number of inmates. It is presumable that every prisoner, therefore, must have been sick once, and half of them twice, each year. The number of lost days of labor during that period was 27,332." We can but hope that the twenty years and more that have elapsed since the time the record refers to, has enabled the authorities to make a vast improvement in the healthfulness of the Ohio penitentiary.

Ventilation is treated of theoretically and practically, and enforced by many striking examples of the bad effects of inattention to it, both foreign and domestic.

Punishment of prisoners is briefly considered by Dr. Griscom. He condemns the demoralizing cat and the murderous shower, and advocates the doctrine that "the true and most effective method of maintaining discipline and promoting the reformation of prisoners, and also of strengthening their intellectual, moral and physical powers, is to *encourage good behavior by offering rewards therefor.*" As a general proposition this is undoubtedly true, but we feel quite sure that there are exceptional cases, where the moral feeling of the prisoner can only be reached by some kind of direct application to the skin. J. F. H.

CORRESPONDENCE.

LETTERS FROM ABROAD.

(Number One.)

[We take great pleasure in presenting to our readers the first of a series of letters from Europe. The author is a graduate of the Miami University, Oxford, Ohio, of Jefferson Medical College, then of the Medical College of Ohio; he served as *interne* of the Commercial Hospital, Cincinnati, and is now abroad purposing to spend two years in professional studies at different schools.

Entertaining for this talented and devoted medical student not merely decided admiration, but a warm personal attachment, we welcome his contributions to the JOURNAL with no little pleasure.—T. P.]

GYCUÆNOLOGY IN BERLIN.

BERLIN, May 31, 1868.

The gross immorality everywhere prevalent in this section of the globe, partly the effect of the abstruse metaphysical direction of their studies, which has rendered Germany the seat and center of infidelity, and partly due to the 20,000 soldiers quartered on the city, who, with the pitiful allowance of four dollars per month, are forbidden by law to marry during the compulsory three years of their service, and in a manner, also, owing to the poverty entailed upon the masses in the support of such a costly administration—all combine to render this place a rich field for the study of the diseases "peculiar to women." Truly is it, "an ill wind which blows nobody good." The scrupulous delicacy, too, which characterizes all our interceurse with the fair sex at home finds no place whatever here; every examination implies full exposure. The women—of course reference is had to the cases at the clinic—early relieved of that modesty which is elsewhere considered a charm, submit to these investigations without a murmur: hence full opportunies are afforded for the prosecution of this department of medicine.

The Royal University of Berlin, founded in 1808, by King William III., is the grand center of instruction in all the arts and sciences. Some four hundred different courses of lectures are annually delivered within its walls. The *Ars obstetricæ* and its collaterals are of course not neg-

lected; a large building, the so called *Eutbindungs Anstalt*, is solely devoted to this purpose. The first floor is occupied by lecture rooms, officers quarters, museum, servants, etc.; the second floor is the hospital proper, and the third story is the residence of the professor, a visit to whose elegant apartments would easily serve to dissipate any idea of impropriety from its position.

Prof. Edward Martin, to whose name might be appended all the titles which characterize the European celebrities, is the chief of the obstetrical department in the Royal University, which means Berlin. An occasional sprinkle of gray hair indicates that he is on the decline of life physically, while still in mental prime. Not a prepossessing face at first sight; a genial, affable gentleman on better acquaintance; a man whose well employed opportunities at Jena and Berlin have given him such a vast experience as to entitle his words to weight. The institution being a government establishment and at government expense, the classes large and the incentives to labor which exist in the gradual preferment to merit powerful, it is not at all strange that every advantage is worked up in the highest degree; hence, everything that can be collected, not only in the hospital but in private practice, is made available for clinical instruction. The general system is arranged as follows: Clinical lectures in the Eutbindungs Anstalt three times a week; lectures, also, three times a week on operative gynæcology, and the tri-weekly clinic at the Charité Hospital on that class of patients confined to bed. The provisions for obstetrics proper shall form the subject of a future letter. The former is the main school in this department. All the outdoor poor of the city with these diseases find relief here. In the lecture room, a tall cushioned table, higher, and but one-fourth as long as an ordinary hospital bed, with two steps for easy ascent, forms the operating table. A stationary cushion for a pillow, and a flexion of the limbs over the edges of the table, so arrange matters as not to require the procrustean efforts at extension necessary to prevent evasion. The force—a clinical clerk, an assistant at the head, another at the feet, and a third to the right, with the microscope, which is always made to contribute its instruction in the display of whatever form of cell or corpuscle, or spermatozoid perhaps, as has several times occurred, may exist in the mucus removed with the examining finger. But two varieties of specula are here employed: the porcelain tube and Sims' metallic, the former almost entirely. It is introduced with the plug, and seems but the work of a second. They appeared a handsome modification of the old Ferguson's, and had many advantages over any form of metal, but one fractured a few days ago in

introduction, and that, too, in the master's hands, so that it is questionable whether its cleanly and handsome appearance is compensatory for its fragility.

The great number of flexions and versions of the uterus daily presented is perfectly surprising; three-fourths of the cases have this malady in some form or other, either as the primitive or complicating cause of their trouble. Prof. Martin is the author of a very exhaustive monogram on this subject, and has had, I understand, considerable success in its treatment. He is certainly an advocate of the pressary, for in his collection and employment are every form and design represented. Those in most common use are, the double concave perforated, the stem, and, as it was gratifying to my national predilections to observe, Hodge's horse shoe. The general plan of treatment does not differ materially from ours at home. First, the subduction of any abnormal condition, then the mechanical support and position. The professor combats rather warmly the doctrine that the uterus has no definite position, and that a deflexion from its usual situation, unless complicated, requires no treatment. His affirmation is, that its position is fixed, and that beyond certain narrow limits any aberration therefrom is abnormal. The causes of such misplacements he ascribes to textural changes in the uterine walls, imperfect involution after delivery, contraction of one or both round ligaments, and adhesion to the anterior abdominal wall, relaxation of the pubo-vesico-sacral ligaments, fibroid and ovarian tumors, long continued distension of the bladder and rectum, etc.

As might be expected in so large a clinic, there is considerable routinism in therapy, and yet it may be of interest to know what particular set of remedies a long experience has proven, or seemed to have proven, the most beneficial. It may be gratifying to those who have had an opportunity to observe the treatment of trachoma, to learn that the Lapis divina, cupri sulph. has a more extended range than an application to granulated eyelids. A dilute solution of sulphate of copper, and a dilute and strong solution of the nitrate of mercury are the only applications which I have seen exhibited, with the exception of a few cases of the tanno-glycerine solution, which is inserted in a saturated tampon, in cases of endometritis. In almost all the cases of cervical erosions, abrasions, ulcerations, acute and chronic inflammations, the copper solution is the *sine qua non*. Nitrate of silver, in substance or solution, or iodine, must be seldom employed, as they have not as yet been applied. No occasion has as yet occurred, either, in which it was thought necessary to employ the various cutting instruments lately devised. In some re-

marks on that subject, the professor informed us that his successes and failures were about equal. He afterwards showed me, in a private conversation, the instrument which best met his approbation. It was Sims' steel instrument, with the curvature of the sound introduced closed into the cervix, when a pressure on the handle protrudes two side blades, cutting on withdrawal. The uterine sound is constantly used, and the length of every one used noted. His instrument is a modification of Simpson's original. It possesses a more gradual curvature, commencing at the handle and continuing throughout. It is certainly easily manipulated in his hands.

Where there is such a diversity of material there must, of course, occur occasionally rare and curious cases. Last week a case presented of hypertrophy of the labia majora, involving the clitoris, very much of the character and appearance of the case of Prof. Wright, not long since removed by Dr. Dawson in the Commercial Hospital. The tumor in this instance was fully the size of a child's head at birth. The patient, however, could neither be persuaded nor coerced to suffer its detachment. Day before yesterday the Professor removed an immense polypus, which was attached to the posterior lip of the uterus. The pedicle was divided with the ecraseur, and the polyp delivered with the obstetrical forceps. The little hemorrhage which ensued was easily checked by the actual cautery through a bone speculum. In yesterday's clinic two cases of prolapse of the posterior wall of the vagina presented. One, a case of distension by ascites from organic disease, the tumor being three inches in diameter, and fluctuating, the other smaller, a rectocele. For the former was of course only the palliation which a paracentesis abdominis afforded, to which she had already been several times subjected; for the latter, a pessary and a purge. An old woman, nearly eighty, was exhibited last week, with entire prolapse of the uterus, cystocele and rectocele complete. The entire surface of the uterus was dry and hardened, of the appearance which the oculists call xerophthalmus in the conjunctiva, posteriorly behind the os two large abrasions from attrition. It was easily reduced, or reposited, and retained by a large stem pessary.

The number of cases of carcinoma is really frightful. Every day a victim presents, mostly, however, of the character described by Graily Hewitt as cauliflower. Two cases of fungous growth from the urethra, each undergoing gradual absorption under the *ne plus ultra*, blue stone.

The female syphilitics are also treated here, but that is scarcely a disease peculiar to women. As an item of interest, however, may be mentioned the induction of the alterative effects by the hypodermic injection of a solution of the bichloride of mercury. CAUL.

LETTER FROM NEW YORK.

(*Number Four.*)

NEW YORK CITY, June 17th, 1868.

DEAR JOURNAL :—It is difficult indeed in these warm, early summer days to quietly sit by your desk and write a letter full of interesting medical facts; because, in the first place, there is comparatively little going on at present in the medical world, and, in the second place, it requires nearly all one's energies to keep one's self cool. Notwithstanding the bad, wet weather of the past two months, there is but little sickness in this city. Last week the number of deaths was 368, a decrease of 60 from the preceding week. There was quite a large number of deaths from scarlatina.

Dr. Harris reports that the sanitary condition of this city and Brooklyn is equal to that of "the two best policed cities of England." This is a subject for profound congratulation, especially as we are daily reading such sad accounts of the ravages of disease in lands across the waters, as, for instance, of the hundred thousand Arabs, in Algeria, who have died of the cholera, combined with a famine, within the period of six months; and of the epidemic of typhus fever, in the western districts of Prussia, which has already claimed seventeen physicians as its victims.

Referring to epidemics of typhus fever, in 1863 and 1864, during the epidemic of this form of fever at Bellevue Hospital, fourteen out of the staff of sixteen young physicians and surgeons were prostrated by it, and eight of these died—a fearful mortality. That was a sad time indeed.

We believe that we have mentioned, in a previous letter, that now all forms of contagious fevers are treated exclusively on Blackwell's Island, and not admitted at all at Bellevue Hospital.

Speaking of city life, "the Builder suggests the startling probability that London will, at no distant period, become uninhabitable. Over 600,000,000 cubic feet of carbonic acid are expired by human beings alone in every twenty-four hours, enough to fill the London streets to a depth of between eight and nine feet. In addition to this there are the smoke and other products of combustion from the daily consumption of 14,000 tons of coal. As the circumference of the city augments, the difficulty of exchanging this vitiated atmosphere increases; and the question arises whether a city may not become so large that its central portions will cease to be habitable."

This, without entering upon a discussion of the question, to say the least, seems to be rather a visionary supposition.

Messrs. Moorhead, Bond & Co., of New York, have recently issued from their well known press the first number of the "American Journal of Obstetrics, and Diseases of Women and Children." The editors of this, which promises to be a most sound and useful journal, are Drs. E. Noeggerath, late Professor of Obstetrics and Diseases of Women and Children in the New York Medical College, and B. F. Dawson, lecturer on Uterine Pathology in the Medical Department of the University of New York. It is a quarterly journal, and contains from 90 to 100 pages. The first number contains the following original articles: one by Dr. T. Gaillard Thomas, on "The History of Eight Cases of Placenta Prævia;" one by Dr. A. Jacobi, on "the Pathology and Treatment of the different forms of Croup;" and articles on "the Rectum and its relations to Uterine Disease," and a "case of Diabetes in an infant," by Prof. H. R. Storer and Dr. James L. Brown, respectively. In this connection it may not be improper to state that Dr. Thomas' new work on "Diseases of Women" is having that large sale which its merits so richly deserve.

Messrs. Lindsay and Blakiston, of Philadelphia, have made arrangements to act as agents in this country for the publications of "The New Sydenham Society." These valuable publications are to be obtained at the reasonable price of ten dollars per annum.

In our last letter we referred to an autopsy, at Bellevue Hospital, on a body that had been perfectly preserved for 72 days by means of carbolic acid. A short time since still another public autopsy took place upon the body of a patient who had died 107 days previously, and had been preserved in a similar manner, with the same highly satisfactory results. The various tissues were perfectly fresh, although such a length of time had elapsed since the patient's death.

Having recently been invited to be present at a formidable operation in Newark, N. J., namely, the extirpation of the parotid gland, by Dr. James B. Cutter, of that city, and the case being one of unusual interest and importance, and the operation of such rare occurrence, it may not be inappropriate to give the full particulars in this place. We are indebted to Dr. Cutter for the following history of the case:

The patient was a young German, about 18 years of age, who presented upon the right side of the neck, somewhat below the parotid region, a large tumor, the size of the clenched hand. He was of healthy appearance, and had never experienced any pain from the tumor, which,

he stated, first made its appearance ten years ago. Until within the last five months its growth had been quite tardy, since which time, however, it has rapidly increased in size. Upon examination it presented a feel not unlike that of a fibrous tumor with a few cysts scattered through it; was uniformly regular in outline, freely movable, and to all appearances not deeply located in the neck. It was impossible to say whether it involved the parotid gland, but all who saw the case were of the impression that it did not. On account of the inconvenience that it occasioned, the patient desired its removal without delay. The patient being under the influence of an anæsthetic, the operation was begun by an incision over the centre of the tumor, from the zygoma down to the edge of the sterno-cleido-mastoid muscle. The superficial hemorrhage was pretty free, and a few vessels had to be secured by torsion. Further dissection revealed the tumor to be venous in character, and intimately connected with the parotid gland, which was considerably increased beyond its usual size. Having determined to remove the tumor with the gland, the dissection was begun from above, but this was found exceedingly difficult, owing to very firm adhesions. Efforts were then directed to the lower portions of the tumor, and here were rewarded with better success, as fortunately the tumor was not nearly so adherent at this point. The introduction of a tenaculum into the mass, to draw it upwards to assist in the dissection, resulted in pretty free venous hemorrhage, which had to be arrested by means of a ligature before proceeding further. After powerful and repeated efforts at tearing, aided occasionally by the use of the knife, to divide the strong bands binding it down, the tumor was elevated, and the point reached through which the external carotid and descending veins passed through the gland. Having separated them distinctly, the external carotid was secured above and below and divided; the portio dura was then divided where it enters the gland, and the whole mass separated from the zygoma by the handle of the knife. The dissection throughout was made with the greatest care, the handle of the scalpel being called into use much more frequently than the blade. The adhesions were very strong, and it was with the greatest difficulty that they could be lacerated. After removal, after making an incision into the substance of the gland, the texture was found much more firm than is normal, and the lobules very intimately bound together by firm fibrous bands. In the centre of the gland was a small cyst, filled with a yellowish white, cheesy matter. Under the microscope the gland tissue presented no abnormal appearances. The walls of the venous cyst, at the lower part of the gland, were traversed in all directions by large veins

in a varicose condition. There was no well marked line of demarcation between the gland proper and this venous cyst, which sent its ramifications through the gland in all directions. Through the gland tissue were seen the branches of the portio dura, a portion of the external carotid artery, and descending veins. After the operation the patient did well. The greater part of the wound healed by the first intention. On the seventh day the boy was out walking and feeling finely.

Did you notice, Mr. Editor, the report by M. Gosselin, in the *Gazette des Hôpitaux*, of the two cases of prurient blenorrhagic conjunctivitis treated by means of frequent injections of strongly alcoholized water? As they are not lengthy, and as the treatment is so simple, we will give them to you: "The first was that of a man twenty-two years of age, who had been suffering from gonorrhœa for four weeks. Five days before his entrance into the hospital he experienced heat and pain in his eyelid, for which he was advised to bathe his eyes in his urine. Five days after this treatment he presented himself to M. Gosselin, who found extensive swelling of the eyelid, a purulent secretion, and marked injection of the palpebral conjunctiva, and a similar injection with extensive chemosis of the ocular conjunctiva. The cornea, iris, and anterior chamber were normal. The same day an injection was made every two hours beneath the lid, with a mixture of two-thirds alcohol and one-third water. On the following day, the suppuration had sensibly diminished, but as the patient complained that the injection caused severe chills, its strength was diminished one half. The same treatment was continued every two hours, and a mixture containing copaiba, cubebs and an opiate was exhibited internally. This treatment was continued for fifteen days, when the only traces left of the disease was a slight redness and swelling of the semilunar fold of the conjunctiva. The second case was that of a man, thirty-eight years of age, in whom, without appreciable cause, both eyes had been attacked for three days previous to his admission into the hospital. His clap was of three weeks duration. Both lids were extensively reddened and swollen; the conjunctivæ were injected and chemosed; there was abundant suppuration from both eyes, and severe pain; both corneæ were transparent. An injection of alcohol and water, equal parts, was made every two hours for the first two days; on the third and fourth days, every four hours; and from the fifth to the eighth days, three times in twenty-four hours. A collyrium of sulphate of zinc and sulphate of copper was then substituted, and an opiate mixture containing cubebs and copaiba was given internally. In both cases, after the suppuration and chemosis had disappeared, superficial ulceration of the

cornea was seen, which did not last long, and was attended with no bad results."

Old Dr. Valentine Mott, in his lectures, used to remind us how necessary it was to ever combine "*dulce cum utile*," in all that we did. And so, Mr. Editor, will you pardon us if, in conclusion, we send you these verses on "Heart Disease," taken from another Medical journal, and if we especially dedicate them to the fair lady M. D.s who read your valued monthly:

"I list, as thy heart and ascending aorta
Their volumes of valvular harmony pour,
And my soul, from that muscular music, has caught a
New life, 'mid its dry anatomical lore.

"Oh! rare is the sound, when thy ventricles throb,
In a systolic symphony, measured and slow,
While the auricles answer with rythmical sob,
As they murmur a melody wondrously low.

"Oh! thy cornea, love, has the radiant light
Of the sparkle that laughs in the icicle's sheen,
And thy crystalline lens, like a diamond bright,
Through the quivering frame of thine iris is seen.

"And thy retina, spreading its luster of pearl,
Like a far-away nebula, distantly gleams
For a vault of black cellular mirrors, that hurl
From their hexagon angles, the silvery beams.

"Oh! the flash of those orbs is enslaving me still,
As they roll 'neath thy palpebræ, dimly translucent,
Obeying, in silence, the magical will
Of the oculo-motor-pathetic-abducent.

"Oh! sweet is thy voice, as it sighingly swells
From thy daintily quivering chordæ vocales,
Or rings in clear tones from the echoing cells
Of the antrum, the ethmoid, and sinus frontales.

"And stately the heave of thy maidenly breast,
As the swell of the billow soft rolling to land,
And as soft the vesicular sigh in thy chest
As the sound of the ripple that ebbs o'er the sand.

"But alas! 'tis with many forebodings I pen
Anatomical verses thy beauty to praise,
For I fear that my studies will never again
Bring the solace they gave in happier days.

"Thou hast stolen the charm from my studio dim,
From dissection I turn with embittering wrath;
Thou hast stepped between me, and my skeleton grim,
Oh lady! fair lady! why crossed you my path?"

Yours, very truly, JAMES B. BURNET, M. D.,
Late House Physician at Bellevue Hospital.

MISCELLANY.

Una and the Lion.

[Few women are held in higher esteem by the medical profession than FLORENCE NIGHTINGALE. Probably she has done more, in deeds and words and their influence, for the relief of suffering and disease, than the whole army of so-called strong minded women, clamorous for position, which we, in all honest sincerity, believe God and Nature never designed they should occupy; and this sketch of one who doubtless was led, in part at least, by her example, to tread in her footsteps, will be read with interest.

At this time, when the attention of the profession in this country is being awakened to the importance of having well trained nurses—in consequence of the recommendation of Prof. Gross before the American Medical Association, and the action of the Association thereon—we think a special interest will attach to a sketch like this.

Furthermore, may we not direct attention to the fervid religious spirit which pervades this beautiful tribute? We who are called to do good to suffering humanity, to arrest the ravages of disease, and stay so long as possible the hand of death, must find our highest and most enduring reward in the consciousness of doing good; we need to be strengthened for our life-work from a Fountain whose secret springs are not of this hour, not of this earth; that work we will do all the more faithfully and bravely, looking not for the praise of men, living not merely for present recompense, loving truth and right and justice, leaving policy for sycophantic time-servers and traders in medicine, charitably bearing, so far as possible, reproach and wrong, knowing that ultimately the mists of malice, and envy, and ignorance will be blown away, and the true light of a just and honest, manly life shine forth, if we humbly seek a strength which comes in its best measure and power from true religion—the *religation*, as Coleridge has so well put it, of the soul to its great Author. T. P.]

One woman has died—a woman, attractive and rich, and young and witty; yet a veiled and silent woman, distinguished by no other genius but the divine genius—working hard to train herself in order to train others to walk in the footsteps of Him who went about doing good. To follow Him, she spent herself in activity; she overworked because others underwork. Shall we have let her die in vain?

She died, as she had lived, at her post, in one of the largest workhouse infirmaries in this kingdom—the first in which trained nursing has been introduced. She is the pioneer of workhouse nursing. I do not give her name; were she alive, she would beg me not. Of all human beings I have ever known, she was (I was about to say) the most free from desire of the praise of men. But I can not say—most free; for she was perfectly free. She was absolutely without human vanity; she preferred being unknown to all but God; she did not let her right hand know what her left hand did. I will, therefore, call her Una, if you please; for, when her whole life and image rise before me, so far from thinking the story of Una and her lion a myth, I say here is Una in real flesh and blood—Una and her paupers, far more untameable than lions.

The graceful, tender legends of Catholic saints and martyrs (why call them *Roman* Catholics?) have not a greater miracle than we have here in the flesh. She lived the life, and died the death, of the saints and martyrs; though the greatest sinner would not have been more surprised than she to have heard this said of herself. In less than three years she had reduced one of the most disorderly hospital populations in the world to something like Christian discipline, such as the police themselves wondered at. She had led, so as to be of one mind and heart with her, upwards of fifty nurses and probationers; of whom the faithful few whom she took with her of our trained nurses were but a seed. She had converted a vestry to the conviction of the economy as well as humanity of nursing pauper sick by trained nurses—the first instance of the kind in England; for vestries, of whom she had almost the most enlightened, the most liberal body of men in England to support her, *must* look after the pockets of their rate-payers as well as the benefit of their sick. But, indeed, the superstition seems now to be exploding that to neglect sick paupers is the way to keep down pauperism. She had converted the Poor-Law Board—a body, perhaps, not usually given to much enthusiasm about Unas and paupers—to these views; two of whom bore witness to this effect.

She had disarmed all opposition, all sectarian zealotism; so that Roman Catholic and Unitarian, High Church and Low Church, all literally rose up and called her "blessed." Churchwardens led the way in the vestry-meeting which was held in her honor after her death; and really affecting speeches, made while moving the resolution of condolence (no mere form) to her family, were the tribute to her public service. All, of all shades of religious creed, seemed to have merged their differences in her, seeing in her the one true essential thing, compared with which they acknowledged their differences to be as nothing. And aged paupers made verses in her honor after her death.

In less than three years—the time generally given to the ministry on earth of that Savior whom she so earnestly strove to follow—she did all this. She had the gracefulness, the wit, the unfailing cheerfulness—qualities so remarkable but so much overlooked in our Savior's life. She had the absence of all asceticism, or "mortification," for mortification's sake, which characterized His work, and any real work in the present day as in His day. And how did she do all this? She was not, when a girl, of any conspicuous ability, except that she had cultivated in herself

to the utmost a power of getting through business in a short time, without slurring it over and without fid-fadding at it;—real business—her Father's business. She was always filled with the thought that she must be about her "Father's business." How can any undervalue business habits? as if anything could be done without them. She could do, and she did do, more of her Father's business in six hours than ordinary women do in six months, or than most of even the best women do in six days. But, besides this and including this, she had trained herself to the utmost—she was always training herself; for this is no holiday work. Nursing is an art; and, if it be made an art, requires as exclusive a devotion, as hard a preparation, as any painter's or sculptor's work; for what is having to do with dead canvas or cold marble, compared with having to do with the living body—the temple of God's spirit? It is one of the Fine Arts; I had almost said, the finest of Fine Arts. I have seen somewhere in print that nursing is a profession to be followed by the "lower middle-class." Shall we say that painting or sculpture is a profession to be followed by the "lower middle-class?" Why limit the class at all? Or shall we say that God is only to be served in His sick by the "lower middle-class?" The poorest child without shoes, the most highly-born, have alike followed all these professions with success, have alike had to undergo the hardest work, if for success. There is no such thing as amateur art; there is no such thing as amateur nursing.*

I return to the training which this servant of God gave herself.

Before she came to us, she had been at Kaiserswerth, and already knew more than most hospital matrons know when they undertake matronship. She was sometime with the Bible Women in London. Overdone with cares and business, I had lost sight of her, when I was taken by surprise at hearing from our training school at St. Thomas's Hospital that she had asked for admittance there to have a year's training, a step entirely unprompted by us. She told me afterwards that she felt, when she had entered there, as if she knew nothing. While there, she went through all the training of a nurse. Her reports of cases were admirable as to nursing details. She was our best pupil; she went through all the training of a soldier; and she thereby fitted herself for being the best general we ever had.

Many a time, in her after life at the workhouse, she wrote, that without her training at St. Thomas's Hospital she could have done nothing. Unless a superintendent herself knows what the nurses she has to superintend ought to do, she is always at a loss. She is never sure of her work. She must be herself the measure of their work. In a workhouse, she said, this must be pre-eminently the case—more even than in a hospital—because on a workhouse matron fall many more of the decisions as

* It appears to be the most futile of all distinctions to classify as between "paid" and unpaid art, so between "paid" and unpaid nursing—to make into a test a circumstance as adventitious as whether the hair is black or brown, viz., whether people have private means or not, whether they are obliged or not to work at their art or their nursing for a livelihood. Probably no person ever did that well which he did only for money. Certainly no person ever did that well which he did not work at as hard as if he did it solely for money. If by amateurs in art or in nursing are meant those who take it up for play, it is not art at all, it is not nursing at all. You never yet made an artist by paying him well. But an artist ought to be well paid.

to petty medical matters than on a London hospital matron, where the medical and surgical staff are much more numerous and constant.

"Without a regular hard *London* hospital training I should have been 'nowhere,'" she used to say.

She was fond of telling her obligations to our admirable matron at St. Thomas's Hospital. I need, however, but to recall one thing. This very year that she was taken from us she had intended to have "two months more training" at St. Thomas's Hospital as soon as she could safely take a "holiday"—(what a holiday!)—after three weeks with her dear mother and sister. She said she should learn "so much" now, having won her experience, if she had "a little more training."

Dear fellow country-women, if any of you are unwilling to leave a loved and happy home, if any of you are unwilling to give up a beloved daughter or sister, know that this servant of God had a home as fair and happy as any, which she loved beyond all created things, and that her mother and sister gave her up to do God's work. Upon the awful character of that sacrifice I can not speak. They "gave her" (and it) "to God."

I will return to her work at the workhouse. How did she do it all? She did it simply by the manifestation of the life which was in her—the trained, well-ordered life of doing her Father's business—so different from the governing, the ordering about, the driving principle. And everybody recognised it—the paupers, and the vestry, and the nurses, and the Poor-Law Board. As for the nurses (those who understood her,) her influence with them was unbounded. They would have died for her. Because they always felt that she cared for them, not merely as instruments of the work, but for each one in herself; not because she wished for popularity or praise among them, but solely for their own well-being. She had *no* care for praise in her at all. But (or rather because of this) she had a greater power of carrying her followers with her than any woman (or man) I ever knew. And she never seemed to know that she was doing anything remarkable.

It seems unnatural that I should be writing her "In Memoriam," I who have been a prisoner to my room from illness for years, and she so full of health and vigor till almost the last. Within sixteen days of her death I received a letter from her, full of all her own energy about workhouse affairs, and mentioning her own illness, which had begun, but bidding me "not be anxious." But this is not an "In Memoriam," it is a war-cry—a war-cry such as she would have bid me write; a cry for successors to fill her place, to fill up the ranks.

Oh, fellow country-women, why do you hang back? Why are there so few of you? We hear so much of "idle hands and unsatisfied hearts," and nowhere more than in England. All England is ringing with the cry for "Woman's Work," and "Woman's Mission." Why are there so few to *do* the "work?" We used to hear of people giving their blood for their country. Since when is it that they only give their ink? We now have in England this most extraordinary state of things—England, who is, or thinks herself, the most religious and the most commercial country in the world. New hospitals, new asylums, new nurses' homes, and societies for nursing the sick poor at home, are rising everywhere.

People are always willing to give their money for these. The Poor-Law Board, the Boards of Guardians, are willing, or compelled, to spend money for separate asylums for workhouse sick. An act was passed last year for the metropolis to this effect. It is proposed to extend it to the whole country. This act, although miserably deficient, still inaugurates a new order of things, viz., that the workhouse sick shall not be workhouse inmates, not be cared for as mere workhouse inmates, but that they shall be poor sick, cared for as sick who are to be cured, if possible, and treated as becomes a Christian country, if they can not be cured. But are buildings all that are necessary to take care of the sick? There wants the heart and the hand—the trained and skillful hand. Every workhouse and other hospital in the kingdom ought to be nursed by such hands and such hearts. Tell me, does not this seem like a truism?

What we mean by challenging England, if she is the most religious and the most commercial country in the world, to do this work, is this: We do not say, as in Roman Catholic countries, the test of fitness to serve God in this way is whether He has given you private means sufficient to do it without pay. We say: the test is, whether you will be trained so as to command the pay. May we not hope that in this country our Lord, were he to come again, would say, instead of "Ye can not serve God and Mammon,"—Ye can by serving God command that mammon necessary for the workers who must also eat—themselves and their families.

Let the religious motive be so strong that it will enable you to train yourself so as to earn the highest pay for the best work. The pay is offered; it is the trained workers we can not find to be paid.

Thirty years ago if a girl wished for training, there was none to be had. I can truly say there was no training to be had to fit a woman thoroughly for any life whatever. Now the training is offered, there are but few to take it.

We do not say, as was said to women in my day, Look about you, and see if you can catch painfully a few straws of practical experience or knowledge in the wind. We are not now inviting women to a life, without being able to show—Here is the training all ready, if you choose to have it—here is an independent and well paid calling waiting to receive you when you leave your training, if only you have fitted yourselves for it. I might say more than this; I might say we are beset with offers of places for trained nurses and trained superintendents, and we can not fill them. I would I could go out into the highways and hedges, and compel them to come in. How often I have known Pastor Fliender, of Kaiserswerth (he is now gone to his glorious rest), say, when thus pressed by calls from pastors, and from directors of institutions, out of all parts of Germany, "You ask me for deaconesses. Has your district furnished us with any probationers? No; not one. Then, am I to give you the finished article, and you not give me the live material? Am I to raise deaconesses out of the ground by a stamp of the foot?" That is what we, alas! feel often inclined to say when we are pressed from all parts of her Majesty's dominions, colonies included, in that great empire "upon which the sun never sets."

I have spoken chiefly of workhouse hospitals, and their want of trained

nurses and trained superintendents, because I had to describe the work of her who was the first to try to fill the deep yawning chasm, but not, like Curtius, to close it up—and because it seemed the most crying want. But why do I call it so? To answer the calls upon us for trained matrons or superintendents, as well as for trained nurses, for hospitals, and nursing institutions of all kinds, we can scarcely obtain anything like sufficient living materials. By all who have really labored in these and similar fields the same tale is told. People cry out and deplore the unremunerative employment for women. The true want is the other way. Women really trained, and capable for good work, can command any wages or salaries. We can't get the women. The remunerative employment is there, and in plenty. The want is the women fit to take it.

It is wonderful (to return to our own case of the hospitals) the absence of thought which exists upon this point. As if a woman could undertake hospital management, or the management of a single ward—in which, more than in anything else, hundreds, or even thousands, of lives are involved—without having learnt anything about it, any more than a man can undertake to be, for example, professor of mathematics without having learnt mathematics!

It is time to come to the dry bones of the affair after having shown how beautifully these could be clothed in flesh and blood. We admit at St. Thomas's Hospital Training School*—subject to the judgment of the matron, and subject to certain conditions being accepted or fulfilled by the probationer—a limited number of probationers to be trained as nurses for the sick poor. Hitherto we have been compelled to confine ourselves to sending out staffs of nurses to hospitals or workhouses, with a view to their becoming, in their turn, centers of training, because the applications we receive for trained nurses are far more numerous and

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* Writers on sick nursing have repudiated training, without saying what training is. I perceive that I have used the word "training" a great many times. And neither have I said what it is.

We require that a woman be sober, honest, truthful, without which there is no foundation on which to build.

We train them in habits of punctuality, quietness, trustworthiness, personal neatness. We teach her how to manage the concerns of a large ward or establishment.

We train her in dressing wounds and other injuries, and in performing all those minor operations which nurses are called upon day and night to undertake

We teach her how to manage the helpless patients in regard to moving, changing, feeding, temperature, and the prevention of bed sores.

She has to make and apply bandages, line splints for fractures, and the like. She must know how to make beds with as little disturbance as possible to their inmates. She is instructed how to wait at operations, and as to the kind of aid the surgeon requires at her hands. She is taught cooking for the sick; the principles on which sick wards ought to be cleaned, aired, and warmed; the management of convalescents; and how to observe sick and maimed patients, so as to give an intelligent and truthful account to the physician or surgeon in regard to the progress of cases in the intervals between visits—a much more difficult thing than is generally supposed.

We do not seek to make "medical women," but simply nurses acquainted with the *principles* which they are required constantly to apply at the bed side.

For the future superintendent is added a course of instruction in the administration of the hospital, including, of course, the linen arrangements, and what else is necessary for a matron to be conversant with.

There are those who think that all this is intuitive in women, that they are born so, or, at least, that it comes to them without training. To such we say, By all means send us as many such geniuses as you can, for we are sorely in want of them.

The regulations and previous information required may be obtained by writing to the Secretary of the Nightingale Fund, H. Bonnam-Carter, Esq., 91 Gloucester Terrace, Hyde Park, London, W.

Before admission, personal application should be made to Mrs. Wardroper, St. Thomas's Hospital, Newington, Surrey, S.

urgent than we have power to answer. But, did a greater number of probationers, suitable for superior situations, offer themselves, we could provide additional means for training, and answer applications for district nurses, and many others. These probationers receive board, lodging, training entirely free, a certain amount of uniform dress, and a small amount of pay, during their year of training.

For the efficiency, comfort, and success of a nursing staff thus sent out it is, of course, essential that the trained nurses should not go without the trained superintendent, nor the trained superintendent without the trained nurses.

There are two requisites in a superintendent:—1. Character and business capacity. 2. Training and knowledge. Without the second, the first is of little avail. Without the first, the second is only partially useful; for we can't bring out of a person what is not in her. *We* can only be responsible for the training. The other qualifications can only be known by trial. Now to take superintendents or head nurses, as is done every day, by receiving and comparing of testimonials (not a day's *Times* but shows this process in the vast majority of institutions)—this is hardly more to the purpose than to do as the Romans did, when they determined the course of conduct they should take by seeing whether there were a flight of crows.

The future superintendent would be a great deal the better for two years of training for so difficult and responsible a post. But such are the calls upon us that we can often give her scarcely one.

If the lady, in training for a superintendent, can pay for her own board, it is of course, right that she should do so (everything else is, in all cases, given free). At the present time we are able to admit a few gentlewomen free of all expense, and with the small salary above mentioned during the year of training. We have applications from institutions in want of trained superintendents (or matrons), and trained head nurses for hospitals in India and in England, and for a large workhouse infirmary.

In December we sent to New South Wales, by desire of the government there, which defrayed and assumed all expenses, to take charge of the Sydney Infirmary and to found a future training school for the colony, five trained nurses and a trained lady superintendent.*

I give a quarter of a century's European experience when I say that the happiest people, the fondest of their occupation, the most thankful for their lives, are, in my opinion, those engaged in sick nursing. In my opinion, it is a mere abuse of words to represent the life, as is done by some, as a sacrifice and a martyrdom. But there *have* been martyrs in it. The founders and pioneers of almost everything that is best must be

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* The engagement was for three years. First-class passage out, all paid.

The pay now usually given in English hospitals for trained nurses is from £20 to £30 a year, with everything "found;" for hospital, *i. e.*, ward "sisters," in some London hospitals £50, with like advantages; and for matrons or superintendents in provincial hospitals from £60 to £100, with board and lodging.

The salaries given to the nursing staff sent to Sydney were on a more liberal scale.

A wing is being added to the infirmary of Sydney for the accommodation of the future superintendent, nurses, and probationers, the most complete and costly thing which has ever been erected for a nursing staff, and which puts to shame our London hospitals in this respect.

martyrs. But these are the last ever to think themselves so. And for all there must be constant self-sacrifice for the good of all. But the distinction is this—the life is not a sacrifice; it is the engaging in an occupation the happiest of any. But the strong, the healthy wills in any life must determine to pursue the common good at any personal cost—at daily sacrifice. And we must not think that any fit of enthusiasm will carry us through such a life as this. Nothing but the feeling that it is God's work more than ours—that we are seeking His success and not our success—and that we have trained and fitted ourselves by every means which He has granted us to carry out His work will enable us to go on.

Three-fourths of the whole mischief in women's lives arises from their excepting themselves from the rules of training considered needful for men.

And even with this thorough training, we shall have many moments of doubt, of dread, of discouragement. But yet the very pressure of the work, of which the cares are so heavy, prevents us from having time to dwell on them.

The work has great consolations. It has also great disappointments, like every other noble work where you aim high; and if there has been one thing expressed to me more often and more strongly by her we have lost, it is what I have tried to say above.

I must end as I have begun, with my Una.

I can not say in my weak words, what she used to tell as to her questionings: "Shall I be able ever to meet the dreariness, the disappointments, the isolation?" And the answer, "Not in my own strength, but in His; not for my work's sake, but for His." "My grace is sufficient for thee. My strength is made perfect in thy weakness." That answer of God to St. Paul, she realized in her daily life more than any one I ever knew.

She was peculiarly sensitive to little acts and words of kindness, and also of unkindness; and if a nosegay, a friendly letter came to her in her times of overwork and discouragement, she would take it exactly as if it had been sent her by her Father Himself. "I do not say to Him, give success," she once said; "if all fails to human eyes, if I do nothing, 'not my way, but His be done: not as I will, but as Thou wilt.'"

More completely and unreservedly than any one I ever knew, she gave herself: "Behold the handmaid of the Lord, be it unto me according to thy word."

And it was so. What she went through during her workhouse life is scarcely known but to God and to one or two. Yet she said that she had "never been so happy in all her life."

All the last winter she had under her charge about 50 nurses and probationers, above 150 pauper scourers, from 1,290 to 1,350 patients, being from two to three hundred more than the number of beds. All this she had to provide for and arrange for, often receiving an influx of patients without a moment's warning. She had to manage and persuade the patients to sleep three and four in two beds; sometimes six, and even eight children had to be put in one bed; and being asked on one occasion whether they did not "kick one another," they answered, "Oh, no,

ma'am, we're so comfor'ble." Poor little things, they scarcely remembered ever to have slept in a bed before. But this is not the usual run of workhouse patients. Among them are the worn-out old prostitutes, the worn-out old thieves, the worn-out old drunkards.

Part of the work in workhouses is to see that the dissolute and desperate old sinners do not corrupt the younger women, fallen, but not hopeless; to persuade the *delirium tremens* case, wandering about in his shirt, to go back quietly into his ward and his bed. Part of the work is to see that the mothers of the sick children do not quarrel, ay, and fight, and steal the food of one another's children.

These are among the every-day incidents of workhouse life. And, if any one would know what are the lowest depths of human vice and misery, would see the festering mass of decay of living human bodies and human souls, and then would try what one loving soul, filled with the spirit of her God, can do to let in the light of God into this hideous well (worse than the well of Cawnpore), to bind up the wounds, to heal the broken-hearted, to bring release to the captives—let her study the ways, and follow in the steps of this one young, frail woman, who has died to show us the way—blessed in her death as in her life.

If anything ought to nerve the official crowd of the Poor-Law Board, and us women on the non-official side, to resolve on fighting this holy crusade, until all the sick poor of these kingdoms are cared for as children of God, it is surely the fact that so precious a life has been sacrificed in discharging a duty, which, if the country had recognised it as a duty, ought to have been unnecessary after three centuries of a Poor Law.

The last words spoken to her were, "You will soon be with your Savior." Her reply was, "I shall be well there." And so she passed away. In her coffin she had that listening, beaming expression, peculiar to her in life, as if always hearkening to the Master's bidding—in death, as if hearing the words, "Enter thou into the joy of thy Lord."

Years of previous action had prepared this young girl for her life of devotion. Her body was taken back to her own people to be buried in her father's vault.

All the old folks went out to meet her—old men and women of near ninety years of age, who could scarcely move on crutches. The young men who had been her own scholars in her big boys' evening class, went a distance to meet the funeral, and carried in the coffin themselves. The school-children and the school-mistresses gathered primroses and snowdrops and violets from all the country round, and brought these, and yew and ivy from the garden which she had planted for them herself. The whole district seemed to be there—at the grave of their dear one. But the hush of solemn silence was so great that they could hear the fall of the violets on the coffin. The grave was surrounded, first by rows of school-children—behind them, on one side the young women, on the other the young men of her Bible classes—and behind these again the elder women and men with whom she had read and prayed. She lay, after the service, completely strewn over with primroses and snowdrops showered upon her coffin. After all was over, the school children and mis-

tresses sent a message to her poor sick paupers, that they would be glad to hear that their kind friend had been as gently laid in her grave as an infant laid to rest in its mother's arms.

It is proposed to erect on the spot where she died perhaps the grandest religious statue ever sculptured by mortal hands—Tenerani's Angel of the Resurrection—as a fitting memorial of her work, and a type of the hope to come. Shall we not also build up living statues to her? Let *us* add living flowers to her grave, "lilies with full hands,"—not fleeting primroses, not dying flowers. Let us bring the work of our hands, and our heads, and our hearts, to finish her work which God has so blessed. Let her not merely "rest in peace," but let hers be the life which stirs up to fight the good fight against vice, and sin, and misery, and wretchedness, as she did—the call to arms, which she was ever obeying:

"The Son of God goes forth to war,
Who follows in His train?"

Oh, daughters of God, are there so few to answer?

FLORENCE NIGHTINGALE.

London, 1868. [*Good Words, for June.*

Anecdotes of Abernethy.

A female, who consulted Mr. A. for an ulcer she had on her arm, was paticularly asked, "What is the matter with you?" The patient immediately held up her arm, but did not utter a word. "Oh! oh! poultice it, and take five grains of blue pill every night, that's all; come again in a week." The fee was presented, but refused; at the end of the week the patient presented herself again, when the same pantomime took place, and the fee again refused. After a few more visits, Mr. A., on looking at the arm, pronounced it well, when the patient again offered a fee. "No," said Abernethy, "from *you* nothing will I receive, for you are the most sensible woman I ever saw. *You don't talk!*"

Mr. T., a young gentleman with a broken limb, which refused to heal after the fracture, went to consult Mr. A.; and, as usual, was entering into all the details of his complaint, when he was stopped almost in *limine*—"Pray, sir, do you come here to talk, or to hear me? If you want my advice, it is so and so—I wish you good morning."

A scene of greater length, and still greater interest and entertainment, took place between our eminent surgeon and the famous John Philpot Curran. Mr. Curran, it seems, being personally unknown to him, had visited Mr. Abernethy several times, without having had an opportunity of fully explaining, as he thought, the nature of his malady, at last determined to have a hearing; when, interrupted in his story, he fixed his dark bright eyes upon the doctor, and said, "Mr. Abernethy, I have been here on eight different days, and I have paid you eight different gueneas; but you have never yet listened to the symptoms of my complaint. I am resolved, sir, not to leave this room until you satisfy me by doing so." Struck by his manners, Mr. Abernethy threw himself back into his chair, and assuming the posture of a most indefatigable listener, exclaimed, in a tone of half surprise, half humor,—"Oh, very well, sir, I am ready to

hear you out. Go on, give me the whole—your birth, parentage, and education. I wait your pleasure; go on." Upon which, Curran, not a whit disconcerted, gravely began—"My name is John Philpot Curran. My parents were poor, but I believe honest people, of the province of Munster, where also I was born, being a native of New Market, county of Cork;" and so he continued for several minutes, giving his astonished hearer a true but irresistibly laughable account of his birth, parentage, and education, as desired, until he came to his illness and sufferings, the detail of which was not again interrupted. It is hardly necessary to add, that Abernethy's attention to the gifted patient was, from that hour to the close of his life, assiduous, unremitting, and devoted.

Mrs. J—— consulted him respecting a nervous disorder, the minutiæ of which appeared to be so fantastical, that Mr. A. interrupted their frivolous detail, by holding out his hand for the fee. A one pound note and a shilling were placed into it; upon which he returned the latter to his fair patient, with the angry exclamation, "There, Ma'am! go and buy a skipping rope; that is all you want."

Much has been said of the influence which the study of anatomy had on Galen's mind. After contemplating the structure of the bones of a skeleton, and their adaptation to their different functions, he breaks out into an apostrophe, which has been much admired, and in which he is said to have exceeded any other ancient in pointing out the nature, attributes, and proper worship of the Deity. "In explaining these things," he says, "I esteem myself as composing a solemn hymn to the Author of our bodily frame; and in this, I think, there is more true piety than in sacrificing to him hecatombs of oxen, or burnt offerings of the most costly perfumes; for I must endeavor to know him myself, and afterward to show him to others, to inform them how great is his wisdom, his virtue, and his goodness."

The Hippocratic Oath.—I swear by Apollo the physician, and Æsculapius, and Health, and All-Heal, and all the gods and goddesses, that, according to my ability and judgment, I will keep this oath and this stipulation—to reckon him who taught me this Art equally dear to me as my parents, to share my substance with him, and relieve his necessities if required; to look upon his offspring in the same footing as my own brothers, and to teach them this Art, if they shall wish to learn it, without fee or stipulation; and that by precept, lecture, and every other mode of instruction, I will impart a knowledge of the Art to my own sons, and those of my teachers, and to disciples bound by a stipulation and oath according to the law of Medicine, but to none others. I will follow that system of regimen which, according to my ability and judgment, I consider for the benefit of my patients, and abstain from what is deleterious and mischievous. I will give no deadly medicine to any one if asked, nor suggest any such counsel; and in like manner I will not give to a woman a pessary to produce abortion. With purity and with holi-

ness I will pass my life and practice my Art. I will not cut persons laboring under the stone, but will leave this to be done by men who are practitioners of this work. Into whatever houses I enter, I will go into them for the benefit of the sick, and will abstain from every voluntary act of mischief and corruption; and further from the seduction of females or males, of freemen and slaves. Whatever, in connection with my professional practice, or not in connection with it, I see or hear, in the life of men, which ought not to be spoken of abroad, I will not divulge, as reckoning that all such should be kept secret.

While I continue to keep this Oath unviolated, may it be granted to me to enjoy life and the practice of the Art, respected by men in all times! But should I trespass and violate this Oath, may the reverse be my lot!

CONFESSION OF MISTAKES CHARACTERISTIC OF GREAT PHYSICIANS.—Errors in diagnosis, in prognosis, and in therapeutics, every physician makes; but to confess them for the humiliation of one's own self esteem and for the warning and instruction of others, is not always so easily done as their commission. Especially is this task difficult or impossible on the part of inferior men, whose chief capital are self-conceit and the art of *appearing* to possess great skill and ability—in a word playing the *quack*, though sometimes nominally in the regular profession. Pretenders are always infallible, or at least would have people believe so. One of these vain fellows regards it as a personal affront if a physician should know, or knowing should dare to mention, one of his blunders; no matter if it should be mentioned without the slightest design or desire to do the blunderer any harm. May we not all, for our own good and for the good of others, take a lesson from the Father of Medicine? Celsus tells us that

"Hippocrates, knowing and skillful as he was, once mistook a fracture of the skull for a natural suture, and was afterwards so ingenuous as to confess his mistake and to leave it on record. This was acting like a truly great man. Little geniuses, conscious to themselves that they have nothing to spare, can not bear the least diminution of their prerogative, nor suffer themselves to depart from any opinion which they have embraced, how false and pernicious soever that opinion may be; while the man of real ability is always ready to make a frank acknowledgement of his errors, especially in a profession where it is of importance to posterity to read the *truth*."

BESIDE the infallible quack medicines that brag in every newspaper, there are hundreds of nostrums that hold the keys of life and death in every town. Dying is the most unnecessary act of a man's life. "Who is your doctor? Lancet! Why, I wouldn't trust a dog with him! My doctor never lost a case of that kind." And, at the funeral, the solemn truisms about the uncertainty of life, and inevitableness of death, are enlivened with the criticisms on the needlessness, in this case, of dying. "They were infatuated with that doctor of theirs. I told them how 'twould be. I offered to lend 'em my doctor—who never lost a case like this in his life—but they were obstinate. Well, we must all die!"

[*Henry Ward Beecher.*

EDITORIAL AND MEDICAL NEWS.

At the last meeting of the Ohio State Medical Society, a communication was presented from the Cincinnati Academy of Medicine upon the injustice of what is known as the *income tax*. It was stated in this communication that a committee had been appointed by the Academy to consider the propriety of memorializing the proper congressional committee upon this subject. The Society appointed a similar committee.

Undoubtedly it is unjust that men whose income is derived from their daily labor, whether working for salaries or for fees, should be taxed precisely as those whose income is obtained from permanent capital, whether that is invested in stocks, real estate, or some other form of remunerative property; in the former case all emolument ceases with the prolonged illness or death of the laborer, while in the other Dives' capital lives and returns its annual harvest, whether bloated Dives works or sleeps, lives or dies.

But will Congress undo the unjust law at the intercession of the doctors? We apprehend not, for money is needed, and this law is not an unpopular one—nay, with the farming class it is, we believe, popular, for it scarcely derives money from one in a hundred of them; and it is a sad truth that justice sometimes is very much like Sidney Smith said of charity—if A. sees B. in want, he immediately feels that C. ought to relieve him. So men are quite willing that just taxes shall be imposed, provided they take nothing out of their own pockets.

But are the medical fraternity very great sufferers under this unequal law? We apprehend not. Nay, more; we believe that the clergymen, and especially the lawyers, ought first to lift up the cry of injustice, that is if the amount taken from classes is to be the measure of the wrong. A few figures that we shall present in a moment or two will demonstrate this truth. If it should be said that our statistics are not sufficiently extensive—that derived from a single *collection district* of one State, they do not furnish a just criterion for other districts and other States—we can only reply that the general truth is approximated. Some thirty-five years ago the famous Professor Dudley was addressing a class of medical graduates, and advising them as to the selection of locations for practice, said: "Don't go to Indiana, for the country is very sickly and the people very poor, so that by the time you begin to make any money

you will be broken down and ready to die." If the spirit of the famous western lithotomist could inspect the volumes in the office of the Assessor of Internal Revenue, in the district furnishing our figures, he might conclude that in more than a third of a century, while a complete change as to the unhealthfulness of climate and as to the pecuniary condition of the inhabitants of this part of the State has been wrought, yet still it does not present an inviting region, so far as emolument is concerned, to the medical practitioner.

But to a few facts and figures:

Hancock county, (Ind.,) has 27 physicians, and not one of them pays any income tax; Shelby county 26, and three pay on $902; Johnson county 22, and one fortunate doctor of the number has a taxable income of $460; Morgan county, with 28 doctors, has one who pays on $131; Hendricks county 31, and three pay on $1,548; Marion county 164, and eighteen pay on $17,474. Summing up the results, we have in these six central counties of Indiana 238 physicians, twenty-six of whom pay income tax on $20,515.

Indianapolis has 37 preachers, and of these fourteen pay an income tax, that is one out of $2\frac{9}{14}$; whereas in Marion county, the proportion of physicians, and fully four-fifths of these are in the city of Indianapolis, paying income tax is only one out of $5\frac{7}{9}$th.

And now let us see how our brethren of the green bag stand. Marion county has 87 lawyers, and of these forty pay income tax on $70,876; in other words, one out of every $2\frac{2}{4}\frac{5}{0}$th pays income tax. It will be seen that relatively nearly three times as many lawyers as doctors pay income tax, and of the former, each one paying about twice as much income as the latter do.

If the statistics that may be derived from other *collection districts* should correspond—and we have no reason to believe that there would be any very material variation—it is quite plain that the income tax bears less heavily upon physicians than upon lawyers and preachers.

Physicians, however, will naturally ask, these things being so, how happens it that medical services do not meet with better remuneration? Are we inferior to lawyers and clergymen in ability and culture? Is our labor of less value than theirs? We will not insult our readers by giving an affirmative answer to these last questions. And yet, while claiming for the medical profession ability quite equal to that of the legal, and while confidently asserting that the physician labors more constantly —with fewer and briefer intervals of relaxation—than either the lawyer or the clergyman, we might ask whether the *capital* invested in prepara-

tion for entering upon these professions is at all in correspondence? A clergyman—we speak of those churches having licensed ministers—has spent four years in his college, and three years in his theological course, that is seven years of study before entering upon the pastorate, and his library is a very poor one that has not cost him at least five hundred dollars. Very many, many more than of the medical profession our observation teaches us, of the lawyers are graduates of literary institutions, and they rarely seek admittance to the bar without having spent two or three years in reading, and a law library, if a good one, would probably be worth from one to two thousand dollars.

How is it in regard to the facility for obtaining a medical education—no, for being declared an M. D.? One Medical College in the United States requires a preliminary examination; nevertheless, though better than nothing, its standard is not high, and we have known instances where young men, who were not fit to commence the study of medicine, had not the requisite English, to say nothing of classical education, to be intelligent learners—nor the intellectual discipline to comprehend the plainer problems of medicine, who have graduated at Medical Colleges.

How much capital, counting time and money, has such an one expended in placing himself before the community, claiming the honors and the emoluments of the physician? On another page we republish one of the vigorous editorials of the *Leavenworth Medical Herald*, inveighing against the low fees charged by the Chicago and Cincinnati schools. The editor ought to have included some other western schools, especially "Ann Arbor," which, not content with furnishing the young men of Michigan with free medicine, invites, by widely circulated advertisements, those from other States to come almost "without money and without price," and enjoy the cheap luxury. Has not the profession become crowded, over crowded, by the very facility with which men may enter it? No preliminary education required, fees low, lecture term short, and the requisites for graduation at no medical school, east or west, of which we have any knowledge, up to the standard that they should be even nominally considered, while it is to be feared that in some schools that standard, from favoritism, from errors of hurry, or other cause, from fear of damaging popularity, etc., is sometimes lowered to meet particular cases. We verily believe that if our profession is to be better rewarded for its arduous services, we must commence by a diminution in the quantity and an improvement in the quality of those who enter upon its responsible duties; and the first step must be taken by physicians themselves. Let them encourage qualified young men to engage in medical studies, and

let them utterly discountenance all who have not the natural abilities nor the preliminary training. Let us assert the truth that Medicine demands as high an order of endowments, as large and thorough a culture, and as diligent, profound, and continued study as any other calling in the world. Let us encourage the real students of the profession, the men by whom professional knowledge is increased and diffused, instead of approving the abominable heresy that large knowledge of books is necessarily inconsistent with practical sagacity and skill at the bed side.

ECLECTIC—ECLECTICISM.—Before the commencement of the Christian era there was a sect of philosophers who *selected* from the systems of philosophy then extant, especially from Platonism, all that they believed valuable and true, to be combined in the formation of a new system; these were called *eclectics*, and their philosophy was *eclecticism*. The peculiar fitness of the terms must be quite obvious to any one who has even a slight knowledge of the Greek language.

Some forty years ago Victor Cousin first made proclamation of a modern *eclectic* philosophy. He taught that there was an element of truth in all philosophical systems; truth, too, revealed by the reason in the calm of consciousness when the passions are stilled, prejudices subdued, and imagination restrained. The universal consciousness of humanity speaks in all systems and their changes, and its voices from age to age proclaim the truths which, combined, make Cousin's eclectic philosophy.

Returning to ancient times, although subsequent to the origin of the eclectic school of philosophers, there was a similar school in medicine, and some of the most eminent medical names were adherents of it, *e. g.* Archigenes and Aretæus.

Without referring further to *eclecticism* as it appears in the history of medicine, save to remind our readers that its most recent development belongs, not an invaluable *treasure, to our own country, we want to protest against the disposition some medical gentlemen have to limit the

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*The picture which has been recently drawn by a vigorous writer, in their leading periodical, of the needs of their sect, is not at all flattering. This writer, after urging the importance of an efficient Medical College, says: "There should be first-class books in eclectic practice. There are publications enough, such as they are, already. But in point of literary merit, many of them do not come up to the mark. Generally they are defective in style. Many eclectic practitioners, even men of merit otherwise, are fond of what is called "highfalutin." The advertisement of a quack nostrum too closely resembles the professions of many eclectics. There is also too little acquaintance with the English as well as with the classical languages. I am often shocked and even disgusted with the diction and orthography employed by physicians. To be sure, the old school physicians are not much better, but they are not the standards," etc., etc. We are glad that the writer admits regular physicians to be superior, even if it be "not much," in education to the eclectics.

term eclectic to a particular school, and to regard it as having a sinister meaning. Now nothing is more remote from the etymologic signification of the word, and nothing in more direct antagonism with the spirit of true medicine. The truth is, that every sensible physician is *eclectic*, choosing, selecting out whatever he believes to be true and good from all sources. Every valuable remedy is *eclectic*—taken, chosen from means that are less valuable or useless; every advance in medicine is eclectic, an onward way chosen where other ways would lead from the true path. Regular medicine, says Dr. Holmes, is truly eclectic; it stands ready to-day to accept anything from any theorist, from any empiric, who can make out a good case for his discovery or his remedy. Let no man deceive himself or others, with the perversion of a word and the prejudices in reference to it.

The Western Tripod of Medicine.

In calling attention to the annual announcement of Rush Medical College, to be found in our present number, we are again led back to the subject which has been so frequently the theme of discussion in these pages—that of medical education in America.

We have heretofore confined our remarks in great measure to the low standard of the doctorate in our country, and the utter absence of that uniform grade of acquirement which should be universally and peremptorily demanded as the just equivalent of a most honorable distinction. Though the great mass of the medical profession, appreciating the debased level to which the shallow flooding by the colleges must inevitably reduce their noble calling, have been actively agitating the question of a wholesome reform, yet the professional ambition and the collegiate rivalry have resulted in the unnecessary multiplication of schools, and, in some instances, in an unworthy and almost commercial strife for patronage.

As though it were not bad enough, however, to open the portals of a most intricate and profound science to whomever may present himself with the nummulary password, regardless of any intrinsic adaptation to or acquired fitness for the exalted position to which he aspires, some of our western schools, by reducing the feeble barrier erected by a reasonable monetary requirement, have almost obliterated the last obstacle to a universal flooding of the ranks medical; and have made the creation of a modern doctor of medicine but the question of some fifteen months time, with the expenditure of about one hundred dollars in money.

The cities of Cincinnati, St. Louis and Chicago, form, by an extension of lines from one to the other, almost an equilateral triangle, the distance from one point to the other being about three hundred miles. Geographically these great commercial points are objective centers of sharply divided districts of country. Each of these cities has a tributary region of which it were folly for either of the others to talk of depriving it. While Cincinnati can claim a territory west of the Alleghanies, east of the Mississippi, and south of the Ohio to the Cumberland mountains, or even further; St. Louis, west of the Mississippi to the Rocky mountains,

and south even to the gulf of Mexico; Chicago can sound her bugle throughout the great Northwest, and call to her shops the trade of Illinois, Wisconsin, Iowa, Nebraska, and the immense region of country lying between the Missouri river and the Rocky mountains.

These cities, then, have separate commercial interests, and as a consequence, they are distinct elevations on the great map of commercial intercourse. Commerce leads the van of an enlightened civilization, and literary culture follows the wake of financial prosperity. Why, then, should a rivalry exist between localities which nature has not marked out for rivals? Why should a strife be begotten which can only result in woe to those engaged in it?

During the past winter, while on a visit to Cincinnati, we had a conversation with one of the professors, in relation to the medical schools of that city, and their low charges. "Oh," said he, "*we* are not responsible for the low charges." And a few days since, a distinguished teacher in one of the Chicago schools, repeated the identical words to us: "We are not responsible for the low charges." If it would not be considered an impertinent question, we should like to inquire who *is* the responsible party? Having become possessed of this piece of information, we should like the privilege of showing the party that it is seldom a paying satisfaction to cut off the nose to spite the face. In Cincinnati there are three regular schools, charging respectively, $20, $40, and $60* for the course. In Chicago there are two, each charging, we believe, $50 for the course; while in St. Louis there are three, charging $105, or the old standard. We can show by figures, we think, that the total attendance of pupils, last winter, in the St. Louis schools, equalled the total attendance in either of the other cities. We now speak from memory only, but we can not be far wrong. If this be a fact, it presents an argument against cheap rates, which we are willing to leave without further comment.

Whatever may be the numerical results, however, we entertain the sentiment common to all thinking men with whom we have conversed—the sentiment that when the time arrives for the degree of M. D. to be put upon the shelf with the other articles of the shop, and to become a subject of contest between the different localities, as to which shall sell it cheapest, we shall be ready to exclaim, *actum est de Republica medicinæ!* and shall thereafter advocate a trans-Atlantic diploma as the only true evidence of medical qualification.

In the name of the enlightened body of physicians of America, we charge you, gentlemen of Cincinnati and Chicago, to pause and reflect upon the violence which you are doing to the cause of true medicine in your time and in your generation. We charge you by the honorable memories clustering around your institutions, to give your energies to the noble support of the burden which has been transferred from the shoulders of your worthy predecessors to your own; and we charge you, in the sacred interest of a nation's life, to throw around it those safeguards which the intellect of the nineteenth century has fashioned into an instrument of genuine defence against the ills of an erring humanity.

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* This is an error. The Ohio and the Miami schools each charge $60.—T. P.

We speak strongly; we feel so. We use harsh words; it is but the language of truth and justice. Nor have we yet done with the subject. We propose to discuss the subject in all its bearings; and while we shall endeavor to discuss it in a calm and considerate manner, we shall not hesitate to give the broadest and most unreserved expression to our opinions, let it affect whom it may. [*Leavenworth Medical Herald.*

The Election of Professor Meigs.

The canvass which has been going on during the past month for the chair of the Institutes of Medicine and Medical Jurisprudence, made vacant in the Jefferson Medical College by the resignation of Professor Robley Dunglinson, terminated Tuesday evening in the election of James Aitkin Meigs, M. D. The successful candidate is a well known physician of this city, who received his diploma from the college in which he has just been chosen a professor. Although yet a young man, he enjoys a very high reputation as a skillful practitioner and scientific investigator. Our Academy of Natural Sciences, in which he has been for years an active member, owes much to him for the arrangement of the Mortonian collection and for the contributions to it which his efforts have secured. His published catalogue of this collection has always been regarded as a valuable addition to the literature of craniography. This and his many other publications on ethnology, physiology, and kindred subjects have attracted the attention and regard of men of science in this country and in Europe, and gained for him the honor of election to membership in several of the learned societies in England and France. At the late Congress of the Anthropological Societies of Europe, held in Paris, he was one of the few Americans selected as foreign members—a distinction conferred upon Agassiz, Squier, Wyman, and also upon Dr. Joseph Leidy, another of our own citizens.

Dr. Meigs is a graduate of the Central High School, and has twice before held a professorship of physiology, at first in the Philadelphia College of Medicine, and afterward in the Medical Department of Pennsylvania College. In both these positions he exhibited such learning and ability as gave promise of great usefulness in his profession. This promise has now the opportunity of being realized, and we may safely congratulate the Jefferson College in having secured the services of one so competent to promote its interests and maintain the high character which it holds among the medical institutions of the country.—*Philadelphia paper.*

The address of Dr. E. B. Stevens, late President of the Ohio State Medical Society, is thus referred to: "The retiring President, Dr. E. B. Stevens, was then introduced and delivered his annual address, which, for eloquence, force, and sound logical reasoning, is rarely if ever surpassed. The speaker consumed about fifty minutes in its delivery, and was frequently applauded."

The Jewett and Russell Prizes, of $200 each, have been awarded to Prof. Roberts Bartholow, of Cincinnati, by the Connecticut State Medical Society. Dr. James F. Hibberd, of Richmond, Indiana, receives a similar honor from the Massachusetts Medical Society.

Origin of Infusoria.

Prof. Bennett, in a lecture "On the Atmospheric Germ Theory of Infusoria," delivered before the Royal College of Surgeons, Edinburgh, on January 17, 1868, (*Edinb. Med. J.*, March, 1868), stated the conclusions to which he had been led by observations conducted by him for a number of years. He considers that the infusoria, "vegetable and animal, which we find in organic fluids during fermentation and putrefaction, originate in oleo-albuminous molecules, which are formed in the fluids, and which, floating to the surface—constitute the primordial mucous layer of Burdach—the proligerous pellicle of Pouchet. There, under the influence of certain conditions, such a temperature, light, chemical exchanges, density, and composition of the atmospheric air, and of the fluid, etc., the molecules by their coalescence produce the lower forms of vegetable and animal life." He carefully describes the movements of bacteria and vibriones; and the disputed question as to how these grow in length he has settled by actual observation. On two occasions he saw two isolated bacteria unite together lengthways, so as to form a single moving filament. He points out that the so-called germs, collected by Pasteur from the air by means of gun-cotton, are wholly unlike the great majority of the particles we see in the proligerous pellicle. Moreover, these so-called germs, when they can be detected are exceedingly few in number, whereas any fragment of the prodigerous pellicle is crowded with incalculable numbers of molecules, for which he contends, Pasteur's germs are wholly inadequate to account. The notion that the molecules of the pellicle multiply by division he considers opposed to the fact that they always appear before the vibriones, and evidently unite to produce these: further, he says, "if the primary molecules on the surface of an infusion possess the property of dividing, they can not at the same moment possess the property of elongating and forming filaments. The one function is subversive of the other. While then a cell or vibrio may possess the property of growth and division, these two functions must be exercised at different periods of time, so that, in reference to the early stage of formation, if the molecules divide, bacteria and vibrios could not be formed. A mass of vibrionic molecules is not a compound organism; it is a mere aggregation of similar simple elements. Each of these in passing through certain phases of development may be arrested, or reach maturity at various periods, so that we frequently see different forms present at one time; but that the same forms and the same stages of growth should exhibit directly opposite functions, is surely not in accordance with physiological knowledge." Therefore his conclusion is that the vibrones and other filaments are evidently formed from the molecules, and not the molecules from the filaments. He has also performed numerous experiments, with a view to determine whether or not it is possible to prevent the development of infusoria in a fluid by means calculated to destroy germs. These experiments were similar to those performed by Schutze, Schroeder, and Dusch, and others, with this difference, that he in every case used nearly all the agents which have been proposed to destroy germs. These experiments have convinced him, that although means be used to destroy germs in an infusion and in the air in contact

with it, infusoria are developed notwithstanding. In conclusion, he points out that these facts and arguments are hostile to the doctrines "omne vivum ex ovo," "omne cellula e cellula," and lastly directs attention to many circumstances which show that organic forms are first produced, and vital properties are afterwards added to them.

[*Journal of Anatomy and Physiology, May*, 1868.

On the Treatment of Dysentery and Dysenteric Paralysis by Nux Vomica
By Dr. DE SAVIGNY.

Dysentery, according to Dr. de Savigny, is in a great measure due to intestinal paralysis; and in a treatise he has published on the former disease, he has shown that its proximate cause depends upon a lesion of the spinal cord, which paralyses the excito-motor nerves of the muscular layer of the large intestine, as well as the vaso-motor nerves of the capillaries spread over the mucous membrane. According to this method of viewing the nature of dysentery, its principal phenomena, and the modifications they undergo by favorable treatment, are explained much better than by any other theory. Dr. de Savigny finds that the powder of nux vomica is the best preparation, if it is desirable to act specially upon the intestine, to restore its contractility, and to diminish the number and to change the morbid nature of the evacuations. He gives it in the dose of from twenty to sixty and seventy-five centigrammes in a day, but he advises that the quantity given a day should not exceed a gramme, (fifteen grains,) and he mixes it with powdered canella. He has employed this treatment especially in cases of the most severe kind, namely, those brought from hot countries, and it has therefore sometimes failed; but he has been struck with certain effects produced by the remedy which confirm his views as to the nature of dysentery, namely, the return of tonicity and intestinal contractility, very distinctly perceived by some intelligent patients, and demonstrated moreover by the disappearance of the involuntary evacuations, or by the power of resisting a little better the manifestation of the imperious necessity of evacuation. At the same time he found that the muscular depression of the limbs diminished and the digestion improved, and the nutrition was more complete, so that the natural alvine evacuations were restored.—*Bulletin Generale de Therepeautique, Sept.* 13, 1867;—*Medical Gazette.*

Physiological Action of Bromide of Potassium.

An experimental research of great merit has been communicated to the Therapeutical Society of Paris by MM. Martin-Damourette and Pelvet, (*Bulletin Général de Therepeutique*, 1867, *p.* 241 *and p.* 289,) on the physiological action of bromide of potassium. Their object is the laudable one of elucidating the exact *modus operandi* of this remedy, and for this purpose they have performed numerous experiments of a varied character. Among their conclusions, the following seem to us the most important:

1. The effects of bromide of potassium are always *direct*, that is, due to contact with the tissues, whether at the region of application, or in the parts of the system to which it is carried by the circulation, or in the organs by which it is eliminated.

2. It has no *elective* action: certain systems are, however, affected before others. Thus the sensory nerves lose their properties before the motor, the latter are affected before the spinal cord, and the spinal cord before the muscles.

3. The heart's action is destroyed at a late stage, and its contractions are frequently the only evidence of the vitality of the animal.

4. The respirations are affected in a secondary manner only; they cease at the time of death in birds and mammals, while their continuance in frogs is dependent on the rapidity of the other effects.

5. The minute blood vessels contract immediately, in the region of injection, and later, throughout the organism, and this contraction is succeeded by dilatation.

6. In warm-blooded animals, the temperature falls very sensibly; at first, in the region of injection, and then in every part of the body. This difference depends on the effect on the minute blood vessels, which is at first a local and then a general one.

7. The secretions of the glands are diminished in proportion to the contraction of their blood vessels.

8. The anaphrodisiac power of bromide of potassium is due to contraction of the minute afferent arteries of the *corpus cavernosus*.

9. It is not a poison of any special tissues or systems, it kills all, nerves and muscles; and it may therefore be defined as a general nervo-muscular poison. [*Jour. Anat. and Phys., May*, 1868.

THE CHAIR OF OBSTETRICS in the University of Glasgow is vacant, and, so far as we have noticed, only three candidates are named in connection with the place—Drs. Wilson and Leishman, of Glasgow, and Dr. Simpson, nephew of the celebrated Edinburgh professor, of Edinburgh. Dr. Leishman, the oldest of the three we think, is the son of a somewhat noted clergyman, and is well known to the reading profession by a work on the *Mechanism of Parturition*, published some four years ago. Dr. Simpson has been the assistant of his uncle for some years, has had very fine opportunities both in Edinburgh and on the continent, and has been an industrious contributor, though quite a young man, to professional literature. Dr. Wilson, however, is, if our opinion may be expressed, the ablest man of the three, a man of more depth and originality of thought, and quite as much if not more scholarship and professional experience, one of the most patient and thorough of teachers, and, withal, one of the pleasantest gentlemen it has ever been our good fortune to meet. We trust he will be made the occupant of the vacant chair in the Glasgow University.

GAS-HOUSE ODORS FOR WHOOPING COUGH.—The Hartford physicians are in the habit of sending their patients with the whooping cough to breathe the air of the gas-works. They seem to be well satisfied with the effects. [*Medical Record.*

Vaccine Virus.

M. Chauveau has published an investigation (*Comptes Rendus, Paris, 10 Février*, 1868) undertaken to determine if the activity of vaccine virus resides in all, or in one or more, of the elements of which it is composed. His method was to test experimentally the various elements after they had been isolated from each other as completely as possible. This virus is composed of, 1st, the serum, an albuminous fluid holding the various soluble substances in solution; and 2d, the solid elements, consisting of leucocytes and of elementary granulations, both of which are suspended in the serum. The leucocytes were separated by diluting the virus with ten times its weight of distilled water, (which does not diminish the activity,) and allowing the mixture to remain at rest for twenty-four hours. By this time the leucocytes had subsided to the lower portion. The upper portion, which was entirely free from them, was found to be as active as the original virus; and, therefore, the activity does not reside in the leucocytes. Chauveau next obtained the serum free from granulations, by a process of diffusion. He placed a little virus in a small test-glass and then poured some distilled water into the glass so as to form a layer over the virus, with which, by a little care, it was prevented from mixing. In about forty-eight hours the top layer was found to contain a proportion of all the soluble substances of the serum, while it was entirely free from any of the solid elements. When some of this upper layer was tested by inoculation it was found to be perfectly inert. The serum is not, therefore, virulent, and the activity of the virus must reside in the elementary granulations. A second communication (17 Février) is occupied with an examination of the possible fallacies in the processes by which these results were obtained. These are most satisfactorily explained, and they need not all be detailed here; but one may be referred to as being practically important, namely, the effects of dilution in modifying the activity of vaccine virus. Chauveau found that dilution of the virus with as much as fifteen times its weight of distilled water did not diminish the original activity. When it was diluted with fifty times, it usually failed when inoculated; though on one occasion, a dilution with one hundred and fifty times was successful. From fifteen to fifty times, sometimes failed and sometimes succeeded; but the failures were more frequent the greater the dilution. This is explalned by the greater chance of elementary granulations being about the greater the dilution. [*Jour. Anat. and Phys., May*, 1868.

One of our western medical schools last spring conferred the *honorary* M. D. upon the following gentlemen: Joseph Van Dyke, Orpheus Evarts, John Ten Broek, J. J. Woodward, J. S. Bobbs. Now these gentlemen are regular graduates of medical schools, or they are not; if the degree has already been given of right, as we presume it has to most, if not all, in this list, why should they be doubly doctored, and this time of grace? Very few of our medical schools confer the honorary degree, and probably it would be better did none. The title of M. D. is easy enough of acquisition in the legitimate way.

ONE of the Paris medical papers notices the death, at the age of eighty-seven, of a nun in a Carmelite convent in Italy, who had been bled in the course of her life *three hundred and seventeen times* for attacks of rheumatism, to which she was subject.

THE oldest doctor in the world, Professor F. Verdugo, Salamanca, Spain, died lately, aged 105 years. He had practised medicine for eighty years.

TILDEN & Co. have their circular, in reference to their pharmaceutical preparations, stitched into a homœopathic medical journal. What fellowship the "wine of wild cherry," "elixir of valerianate of ammonia," "elixir of calisaya," "aromatic syrup of blackberry," "fluid opium deodorized," etc., etc., can have with the potencies of Hahnnemanic triturations we can not see. We begin to tremble for the fabric of Homœophathy, with its cloud-reaching and cloud-wrapped theories, lest this circular of Tilden & Co. should prove a wooden horse, filled with armed men to demolish that fabric.

Dr. JOSEPH ADOLPHUS, of Logansport, Indiana, in a recent number of the *Medical and Surgical Reporter*, highly compliments John C. Baker & Co.'s cod liver oil. It is undoubtedly one of the best brands in the market.

TO THOSE of our readers who may be engaged in agricultural pursuits we can cordially recommend the *North Western Farmer*, published at Indianapolis, as an ably conducted, interesting and valuable agricultural paper.

ERROR.—On p. 248, the reader will please substitute "GYNECOLOGY" for the strange jumble of letters heading the letter from Berlin.

FOR SALE.—An order for an artificial leg or arm. Apply at this office.

FOR SALE.—A second-hand amputating case; the instruments in fair condition: Price $20. We wish some one of our readers requiring such a case would procure this one, for by so doing he would contribute to the relief of the widow and orphans of a medical gentleman, who are really in need of help. We will say still more: If any of our friends who may not wish to purchase the instruments, but do wish the independent luxury of doing good to those whose circumstances of distress appeal so earnestly to the sympathies of physicians—for as this widow and these children are to-day, so may some of ours be at a future day—the Editor will be happy to receive, and will acknowledge through the JOURNAL any contributions that may be placed in his hands for the relief of this family.